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# **CURRICULUM VITAE**

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#### **SUMMARY**

Jane Ambuko Lukhachi is an Associate Professor of Horticulture, Department of Plant Science and Crop Protection, University of Nairobi. She holds a BSc Agriculture and MSc Horticulture (University of Nairobi) and PhD Agricultural Sciences (Horticulture and Postharvest Major) from Tsukuba University, Japan. Her current duties and responsibilities at the University include teaching, research, student supervision and outreach activities. Her area of specialization and focus in training, research and outreach activities is postharvest management – science and practice. In this regard she is actively engaged in adaptive research, validating, and scaling up of postharvest technologies mainly targeting smallholder farmers.

She leads a multi-disciplinary research team (University of Nairobi Postharvest Projects Research Team) which is credited with various achievements in Postharvest Research and Outreach initiatives. Among the notable achievements include 1) Conceptualization the All-Africa Postharvest Congress & Exhibition (AAPHCE) as a biennial convening for stakeholders to share information and showcase innovations for food loss and waste reduction in the African Context. The AAPHCE has now been adopted by the African Union Commission as a biennial pan-African convening to showcase technologies, innovations, polices, strategies for food loss and waste reduction in the African context. 2) Cascading marking of the United Nation's International Day of Awareness of Food Loss and Waste (IDAFLW) to the Country level in Kenya. Subsequently, in partnership with development partners and other agriculture sector actors including SNV-Kenya, FAO, SOCAA, KALRO, ASNET, Prof. Ambuko has organized national forums to mark the IDAFLW in 2020, 2021 and 2022. The IDAFLW serves to create awareness about FLW and a call to action for various stakeholders. Kenya's national event is officially recognized by the international IDAFLW team at FAO, Rome 3) Postharvest technology and innovation scale up - this has been achieved through various community engagement and outreach activities guided by the 'lab to land' initiative. To achieve this, Prof. Ambuko and her research team have spearheaded training, demonstration and practical application of postharvest technologies including low-cost cold storage technologies and small-scale processing technologies. With support from development partners including the Rockefeller Foundation, Foundation for Food and Agriculture Research, World Food Program and the National Research Fund, NRF-Kenya, Prof Ambuko and her research team have established smallholder aggregation and/or processing centers for smallholder farmers and traders in Embu, Machakos, Vihiga, Wajir, Turkana and Marsabit Counties. These centers are equipped with simple cooling technologies and/or small-scale processing equipment for fruits and vegetables. The centers have helped the farmers/traders to preserve the food, reduce losses and have better market access for their produce 4) Training and Capacity building activities – apart from student training, Prof. Ambuko has organized and facilitated various capacity building activities for various practitioners in the agriculture/horticulture sector in Kenya and beyond. These activities are aimed at building a critical mass of experts with adequate knowledge on postharvest management with the goal of addressing the problem of food loss and waste in food supply chains.

Prof. Ambuko is active in research and leads several multi-disciplinary research projects supported by various development partners including the Rockefeller Foundation, National Research Fund – Kenya, United Kingdom Research & Innovation (UKRI), United States Agency for International Development (USAID), United Nation's Food and Agriculture Organization (FAO), United Nation's World Food Program (WFP), AGROFRESH LTD, among others. Through the multi-disciplinary research projects, Prof Ambuko has supported and mentored graduated students in various degree programs. She has supervised 38 graduate students (MSc and PhD) to completion and more than 20 others are ongoing at various stages of their graduate studies. Together with her

students and research collaborators, Prof. Ambuko has authored over 70 scientific articles in peer-reviewed journals and over 120 conference papers presented in international conferences. She has also published articles for the non-scientific public in Agriculture sector publications/magazines such the Pan-African Agriculture, HortiNews, HortFresh, Seeds of Gold, Smart Harvest among others. As part of efforts to create awareness about research and innovation, Prof Ambuko has also participated in various local and International TV Programs such as Market Place Africa (CNN International); The Inquiry (BBC), Shamba Shape-up (Citizen TV), Smart Farm (Citizen TV), Food Friday (NTV), Morning Show (KTN) and Farmer TV.

To foster academia-industry partnership and provide academic leadership in the marketplace, Prof. Ambuko serves on various agriculture/horticulture sector committees including the Fresh Fruits and Vegetables Committee of the Kenya Bureau of Standards (KEBS), the National Horticulture Technical Working Group (Ministry of Agriculture), the Mango Technical Working Group, The National Postharvest Taskforce (Ministry of Agriculture). She represents research and academia on the Horticulture-sector led annual conference on Fruits and Vegetables.

For her achievements in research and outreach initiatives, Prof. Ambuko has received recognition from the University of Nairobi (Academic Excellence Merit Award, 2022); the National Diversity and Inclusion Awards and Recognition; Innovation Champion under the USAID Feed the Future; Top Influencer under the African Women in Agricultural Research and Development (AWARD) and other honorable mentions. She is a recipient of several prestigious fellowships including the Norman Borlaug Fellowship (2014), AWARD Fellowship (2013) and ABCF Fellowship (2014). She has served a member of the High-Level Panel of Experts (HLPE) of UN-FAO on Food Security and Nutrition (2014); 3-D Commission on Health, Boston University (2020-2021).

Prof. Ambuko has held various administrative/leadership positions within the University and outside. In the University, Prof Ambuko Heads the Horticulture Unit and coordinates the PhD Horticulture Program. She serves in various committees in the Department and Faculty including the Research and Seminars Committee, the Innovation, Commercialization & Visibility Committee and the Faculty Conferences Committee. She is a member and/or chair of various University committees including the Nairobi Innovation Week, The UoN Research Week Committee, the Agricultural Technology and Innovation Center Implementation Committee, the Sericulture Project Implementation Committee, the UON-MRM Safal Partnership Committee. Outside the University, Prof Ambuko serves on various technical committees in the agriculture/horticulture sector. She serves as an external examiner for various Universities (local and international). She is the national secretary of the Kenya National Young Academy of Sciences (KNYAS), National Vice President, Kenya-International Forum for Science Alumni (Ke-IFSA), National Vice Chair, Kenya Japan Scholars (MEXT) Alumni Association, Member of Executive Committee of the Kenya Japan Alumni Association (KEJAA). She is East Africa's Regional Coordinator for International Society of Horticultural Science (ISHS). She is a member of several professional bodies including the International Society of Horticultural Science (ISHS); American Society of Horticultural Science (ASHS); Horticultural Association of Kenya; African Women in Science & Engineering (AWSE); Kenya National Young Academy of Sciences (KNYAS) and Kenya Professional Association of Women in Agriculture and Environment (KEPAWAE).

Her career goal as an Agricultural/Horticultural Scientist is to contribute to the continued growth of the Agriculture/Horticulture Sector (local and global) through generation, transmission and dissemination of knowledge, innovations and technologies required sustainable transformation. She is also a champion of food loss and waste reduction towards realization of sustainable development goal, SDG 12 (3).

### A. PERSONAL INFORMATION

Nationality: Kenyan

**Profession:** Horticultural Scientist (Area of Specialization – Postharvest Management)

Current Position: Associate Professor and Head of Horticulture Unit, Department of Plant

Science and Crop Protection, University of Nairobi

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## B. EDUCATIONAL/ACADEMIC QUALIFICATIONS

**2008:** Doctor of Philosophy in Agricultural Science (Horticulture and Postharvest Major), Tsukuba University, Japan. Thesis title: <u>'Study on preharvest factors affecting quality and postharvest characteristics of the banana fruit and alleviation of its chilling injury'.</u>

2001: Master of Science in Horticulture, University of Nairobi.

Thesis title: <u>'Effect of Gibberellins and Benzyladenine on yield, yield components and the postharvest shelf life of French beans, *Phaseolus vulgaris* L.</u>

**1996:** Bachelor of Science in Agriculture, University of Nairobi.

1987: Kenya Certificate of Secondary Education (KCSE), Bunyore Girls High School

1983: Kenya Certificate of Primary Education (KCPE), Mulwakhi Primary School

#### C. SELECTED TRAINING COURSES

2019: Pedagogy, Andragogy and Mentorship Training. 19th to 21st June, 2019, CCU, Nairobi

**2013:** Short course in Postharvest Technology by Postharvest Technology Center, University of California Davis, June 2013

2010 – 2012: Postharvest Training of Trainers Program for Sub-Saharan Africa, Horticulture

- Collaborative Research Support Project by the Postharvest Education Foundation
- 2011: Professional Capacity Building Program on Interactive Competency for Rural Innovation in Higher Education by International Center for Development Oriented Research in Agriculture (ICRA), Wageningen Netherlands
- 2008 2010: Multi-stakeholder's Learning Change Process of Strengthening University Capacity for Promoting, Facilitating and Teaching Rural Innovation Processes (SUCAPRI), sponsored by EDULINK
- 2009: Phytosanitary Systems Training Course. 14<sup>th</sup> 25<sup>th</sup> September 2009, Nakuru, Kenya.
  Organized by the International Plant Protection Convention (IPPC), Kenya Plant Health
  Inspectorate Service (KEPHIS) and University of Nairobi Under the Centre of Phytosanitary
  Excellence (COPE) Project.
- **2010:** Sanitary/Phytosanitary Capacity Building Training Tuskegee University in Cooperation with United States Department of Agriculture (USDA)
- 2013 2014: AWARD (Africa Women in Agricultural Research and Development) 2-year mentorship program. Science Writing; Leadership Training, Advanced Science Training Programs

### D. WORK EXPERIENCE

PERIOD	APPOINTMENT	RESPONSIBILITIES
October 2019	Associate Professor,	Teaching, Research, Supervision of students and
to date	University of Nairobi	outreach activities
		Courses taught include:
		Postharvest Physiology and Technology; Industrial
		Crops; Beverage, Medicinal and Nut crops (BSc);
		Advanced Fruit Production and Beverage Crops;
		Advanced Postharvest Physiology and Phytosanitary
		Standards (MSc); Crop Quality & Postharvest
		Management Systems (PhD)

November	Senior Lecturer,	Teaching, Research, Supervision of students and
2014 to	University of Nairobi	outreach activities
October 2019		Courses taught include:
		Postharvest Physiology and Technology; Industrial
		Crops; Beverage, Medicinal and Nut crops (BSc);
		Advanced Fruit Production and Beverage Crops;
		Advanced Postharvest Physiology and Phytosanitary
		Standards (MSc); Crop Production & Postharvest
		Management Systems (PhD)
October 2008	Lecturer, University	Teaching, Research, Supervision of students and
to 2014	of Nairobi	outreach activities. Courses taught include – Same as
		Lecturer Position plus Crop Production &
		Postharvest Management Systems
2002 to 2008	Tutorial Fellow	Teaching (supervised by Senior Lecturer),
	University of Nairobi	Courses taught include: Industrial Crops and Fruit
		Production
1005 / 2001	A 2 1. 1	
1997 to 2001	Agricultural	Agricultural extension activities including:
	Extension Officer	packaging extension messages and training farmers;
		demonstration of horticultural technologies during
		field days; writing divisional reports
1999 to 2000	Part-time Program Office	
	Kenya Professional	Secretariat, coordination of KEPAWAE
	Association of Women in	1 8 71
	Agriculture & Environme	ent Newsletter
	(KEPAWAE)	
1996 to 1997	Graduate Research	Daily running of the tissue culture lab activities
	Assistant, Department	including tissue media preparation for researchers,
	of Crop Science	culture of explants, mass multiplication of TC

## E. PUBLICATIONS IN REFERRED JOURNALS

- 1. Jumbale M, Okoth M W, Abong G O, **Ambuko J**, Gekonge D. Product and process development of mango flakes using response surface methodology. East African Journal of Science, Technology and Innovation, Vol. 4 (2023): Special issue (The HORTI-GREEN Project)
- 2. Sikwaya M S., Abong G O., **Ambuko J**., Gekonge O D. Formulation, acceptability, and chemical characteristics of mango nectar enriched with moringa moringa oleifera, lam

- Bitange NM, Chemining'wa GN, Ambuko J and WO Owino (2023). Effect Of Varied
   Calcium Formulations And Time Of Application On Postharvest Quality And Organoleptic
   Acceptability Of Mango Fruits. Afr. J. Food Agric. Nutr. Dev. 2023; 23(3):22871-22892
   https://doi.org/10.18697/ajfand.118.22485
- 4. Mbusa Sikwaya Schadrack, George Ooko Abong, Jane Ambuko & Duke Gekonge Omayio Chemical and Phytochemical Composition of the Kenyan Apple and Tommy Atkin Mango Pulp. International Journal of Science and Technology. Volume XI, Issue 4, DOI No.: 10.24940/theijst/2023/v11/i4/ST2304-006
- Amwoka, E.M., Ambuko, J.L., Jesang, H.M. and Owino, W.O. (2022). Comparative evaluation of the effectiveness of selected storage technologies to preserve postharvest quality of mango fruit. Acta Hortic. 1348, 43-50
   <a href="https://doi.org/10.17660/ActaHortic.2022.1348.6">https://doi.org/10.17660/ActaHortic.2022.1348.6</a>
- Hutchinson, M. J., Ouko, J. R., Yumbya, P. M., Ambuko, J. L., Owino, W. O., & Subramanian, J. (2022). Efficacy of Hexanal Field Spray on the Postharvest Life and Quality of Papaya Fruit (Carica papaya L.) in Kenya. Advances in Agriculture, 2022.
- Gitau K, Ambuko J, Chemining'wa G and W Owino (2022). Effect Of Harvest Stage And Nitrogen Fertilization On The Postharvest Shelf Life Of Black Nightshade (Solanum Nigrum L.) And Collard (Brassica oleracea var. acephala L.). Afr. J. Food Agric. Nutr. Dev. 2022; 22(6): 20737-20751 <a href="https://doi.org/10.18697/ajfand.111.22085">https://doi.org/10.18697/ajfand.111.22085</a>
- 8. Muiruri J, **Ambuko J**, Nyankanga R and WO Owino (2022). Maturity Indices Of Specific Mango Varieties Produced At Medium Altitude Agro-Ecological Zone In Kenya. Afr. J.

Food Agric. Nutr. Dev. 2022; 22(6): 20752-20774 https://doi.org/10.18697/ajfand.111.22025

- Kathambi J, Ambuko J, Hutchinson M and W Owino (2022). Effect Of Coolbot ™ Cold Storage And Modified Atmosphere Packaging On The Shelf Life And Postharvest Quality Of Collards. Afr. J. Food Agric. Nutr. Dev. 2022; 22(6): 20668-20686 <a href="https://doi.org/10.18697/ajfand.111.22075">https://doi.org/10.18697/ajfand.111.22075</a>
- 10. Owino W. O. and Ambuko, J.L. Mango Fruit Processing: Options for Small-Scale Processors in Developing Countries. Agriculture 2021, 11, 1105.
  <a href="https://doi.org/10.3390/agriculture11111105">https://doi.org/10.3390/agriculture11111105</a>
- 11. Esther Mujuka, John Mburu, Ackello Ogutu, **Jane Ambuko**, George Magambo. Consumer awareness and willingness to pay for naturally preserved solar-dried mangoes: Evidence from Nairobi, Kenya. Journal of Agriculture and Food Research (5) 2021. https://doi.org/10.1016/j.jafr.2021.10018
- 12. Bitange NM, Chemining'wa GN, Ambuko JL and WO Owino. Effects Of Mode And Timing Of Calcium Chloride Application On Tissue Calcium Concentration And Acceptability Of Mango Fruits. Afr. J. Food Agric. Nutr. Dev. 2021; 21(8): 18552-18573 <a href="https://doi.org/10.18697/ajfand.103.20350">https://doi.org/10.18697/ajfand.103.20350</a>
- 13. Beulah Pretorius , Jane Ambuko , Effie Papargyropoulou and Hettie C. Schönfeldt.
  Guiding Nutritious Food Choices and Diets along Food Systems. Sustainability 2021, 13, 9501. https://doi.org/10.3390/su13179501
- 14. Meggie Mwoka, Olivia Biermann, Catherine K. Ettman, Salma M Abdalla, Jane Ambuko, Mark Pearson, Sabina Faiz Rashid, Zahra Zeinali & Sandro Galea, Laura Magaña Valladares and Blessing Mberu. Housing as a Social Determinant of Health: Evidence from

- Singapore, the UK, and Kenya: the 3-D Commission. J Urban Health https://doi.org/10.1007/s11524-021-00557-8
- 15. Olivia Biermann & Meggie Mwoka & Catherine K. Ettman & Salma M Abdalla & Sherine Shawky & Jane Ambuko & Mark Pearson & Zahra Zeinali & Sandro Galea & Blessing Mberu & Laura Magaña Valladares. Data, Social Determinants, and Better Decision-making for Health: the 3-D Commission. J Urban Health <a href="https://doi.org/10.1007/s11524-021-00556-9">https://doi.org/10.1007/s11524-021-00556-9</a>
- 16. Emmanuel M. Amwoka, 1 Jane L.Ambuko, Hutchinson M. Jesang', and Willis O.Owino (2021). Effectiveness of Selected Cold Chain Management Practices to Extend Shelf Life of Mango Fruit. Advances in Agriculture <a href="https://doi.org/10.1155/2021/8859144">https://doi.org/10.1155/2021/8859144</a>
- 17. Peninah Yumbya, **Jane Ambuko**, Margaret Hutchinson, Willis Owino, John Juma, Eunice Machuka, J. Musembi Mutuku. Transcriptome analysis to elucidate hexanal's mode of action in preserving the post-harvest shelf life and quality of banana fruits (Musa acuminata). <a href="https://doi.org/10.1016/j.jafr.2021.100114">https://doi.org/10.1016/j.jafr.2021.100114</a> Journal of Agriculture and Food Research, Vol 3
- 18. Isaac O. Nyangena, Willis O. Owino, Jane Ambuko and Samuel Imathiu (2020). Moisture sorption properties of two varieties of dehydrated mango slices as determined by gravimetric method using Guggenheim–Anderson–de Boer model. Journal of Food Processing and Preservation. <a href="https://doi.org/10.1111/jfpp.15041">https://doi.org/10.1111/jfpp.15041</a>
- 19. Tembe, Kenneth; Samson Lagat; Jane Ambuko; George Chemining'wa; and Willis Owino.
  2020. Variation in Morphological and Agronomic Traits of Selected African Eggplant
  Accessions. Journal of Medicinally Active Plants 9, (2):34-46. DOI:
  <a href="https://doi.org/10.7275/1fy5-dy82">https://doi.org/10.7275/1fy5-dy82</a>

- 20. Enock, Mosenda, George Chemining'wa, **Jane Ambuko** and Willis Owino. 2020. Effect of Water Stress on Growth and Yield Components of Selected Spider Plant Accessions. Journal of Medicinally Active Plants 9, (2):81-97.
- 21. Enock, Mosenda, George Chemining'wa, **Jane Ambuko** and Willis Owino. Assessment of Agronomic Traits of Selected Spider Plant (*Cleome gynandra* L.) Accessions. *Journal of Medicinally Active Plants*. 9, (4): 222-241.DOI: https://doi.org/10.7275/n1wf-6y77
- 22. Naphis Mokaya Bitange, George Ndiema Chemining'wa, **Jane Ambuko**, Willis O. Owino (2020). Can calcium sprays alleviate jelly seed in mango fruits? Journal of Agriculture and Rural Development in the Tropics and Subtropics. Vol. 121 No. 1 (2020) 35–42
- 23. T. Nikuze, E.M. Miinda, **J. Ambuko** and O.W. Owino. Identification of Microsatellite Markers to Bacterial Wilt Resistance in African Egg Plant. Afri. J. Hort. Sci. 17:127-142
- 24. Benson Maina, Jane Ambuko, Margaret Hutchinson and Willis Owino (2020). The effect of waxing options on shelf life and postharvest quality of 'ngowe' mango fruits under different storage conditions. Advances in Agriculture. Volume 2019, Article ID 5085636, 9 pages. https://doi.org/10.1155/2019/5085636
- 25. Esther Mujuka, John Mburu, Ackello Ogutu and Jane Ambuko (2020). Returns to investment in postharvest loss reduction technologies among mango farmers in Embu County, Kenya. Food and Energy Security Volume 9, Issuel. DOI: 10.1002/fes3.195
- 26. Antony Bundi, John Mburu, Stephen Mbogoh, Jane Ambuko (2020). Factors Influencing the Adoption of Pre-Harvest Practices among Mango Farmers in Embu and Machakos Counties, Kenya. International Journal of Postharvest Technology and Innovation. 7(1):56 DOI: 10.1504/IJPTI.2020.108744
- 27. Isaac O. Nyangena, Willis O. Owino, Samuel Imathiu, Jane Ambuko. Effect of pretreatments prior to drying on antioxidant properties of dried mango slices, Scientific African (2019), doi: https://doi.org/10.1016/j.sciaf.2019.e00148

- 28. Isaac Nyangena, Willis Owino, Jane Ambuko and Samuel Imathiu (2019). Effect of selected pretreatments prior to drying on physical quality attributes of dried mango chips. Journal of Food Science and Technology. DOI 10.1007/s13197-019-03857-9
- 29. Yumbya, P., Hutchinson, M., **Ambuko**, J., & Owino, W. (2019). Effect of Hexanal as a Post-harvest Treatment to Extend the Shelf-life of Banana Fruits (Musa acuminata var. Sweet Banana) in Kenya. International Journal of Plant & Soil Science, 29(2), 1-16.
- 30. N. M. Bitange, G. N. Chemining'wa, J. Ambuko and W. O. Owino (2019. Yield and Tissue Calcium Concentration of Mango (Mangifera indica L.) Fruit as Influenced by Calcium Source and Time of Application. International Journal of Plant & soil Science, 28(4): 1-12
- 31. Manyozo, F. N., **Ambuko**, **J.**, Hutchinson, M. J., Kamanula, J. F., (2018). Effectiveness of evaporative cooling technologies to preserve the postharvest quality of tomato, International Journal of AgronoHer and Agricultural Research, 13(2), 114–127
- 32. Loreto Atieno, Willis Owino, Elijah Miinda Ateka and **Jane Ambuko**. (2019). Influence of coating application methods on the postharvest quality of cassava". International Journal of Food Science. Article ID 2148914, 16 pages. https://doi.org/10.1155/2019/2148914
- 33. C. Chemutai., G.N. Chemining'wa and **J. Ambuko** (2018). Effect of fertilizers and harvesting method on yield of cowpea. African Journal of Rural Development, Vol. 3 (2): pp. 779-785.
- 34. George Chemining'wa, **Jane Lukachi Ambuko**, Sam Koile (2018). Effect of fertilizers, time of pinching and harvesting method on growth and yield of spider plant (*Cleome gynandra*). International Journal of Agronomy and Agricultural Research (IJAAR) Vol. 13, No. 5, p. 9-21, 2018
- 35. Tembe KO, Chemining'wa G, **Ambuko J**, Owino W (2018). Evaluation of African tomato landraces (Solanum lycopersicum) based on morphological and horticultural traits, Agriculture and Natural Resources, https://doi.org/10.1016/j.anres.2018.11.014.

- 36. Peninah Mueni Yumbya, Margaret Jesang Hutchinson, **Jane Ambuko**, Willis Omondi Owino, Alan Sullivan, Gopinadhan Paliyath and Jayasankar Subramanian (2018). Efficacy of hexanal application on the post-harvest shelf life and quality of banana fruits (*Musa acuminata*) in Kenya. Tropical Agriculture Volume 95, 1: 14-35
- 37. Margaret Jesang Hutchinson, John Robert Ouko, **Jane Ambuko**, Willis Omondi Owino and Jayasankar Subramanian (2018). Effects of hexanal dip on the post-harvest shelf life and quality of papaya (*Carica papaya* L.) fruit. Tropical Agriculture Volume 95, 1: 43-70
- 38. Anne Kangai, Felister Nzuve, **Jane Ambuko** and Damaris Odeny (2018). Heritability

  Analysis and Phenotypic Characterization of Spider Plant (Cleome Gynandra L.) for Yield.

  Advances in Agriculture. Article ID <a href="https://doi.org/10.1155/2018/8568424">https://doi.org/10.1155/2018/8568424</a>
- 39. M. W. Gateri, R. Nyankanga, **J. Ambuko** and A. W. Muriuki (2018). Growth, Yield and Quality of Onion (Allium cepa L.) as Influenced by Nitrogen and Time of Topdressing. International Journal of Plant & Soil Science. Article no.IJPSS.42135 ISSN: 2320-7035
- 40. **Jane Ambuko**, Esther Karithi, Margaret Hutchinson and Willis Owino (2018). Modified atmosphere packaging enhances the effectiveness of Coolbot cold storage to preserve postharvest quality of mango fruits. Journal of Food Research, Vol 7 (5).
- 41. Gateri M. W., Nyankanga R., Ambuko J. And A. W. Muriuki (2018). The Influence Of Rate And Time Of Nitrogen Top Dressing On The Storage Quality Of Onion (Allium Cepa L.) International Journal of Agriculture, Environment and Bioresearch. Vol. 3, (4) Pg. 477-492
- 42. Mbondo, N. N., W. O. Owino. **Ambuko, J.**, and Ndaka, S. D. (2018). Effect of drying methods on the retention of bioactive compounds in African eggplant (*Solanum aethiopicum L.*). Food Sci Nutr. 2018:1–10.

- 43. Loreto Atieno Oduor, Willis Owino, Elijah M. Ateka, Jane Ambuko (2018). Effect of Surface Coatings on the Shelf life and Quality of Cassava. Journal of Food Research. Vol. 7. (1): 46-60.
- 44. Mungai, G., Owino, W., Ambuko, J., Giovannoni, J., Nyende, A., & Michuki, G. (2018).
  Genetic diversity within African tomato using next generation sequencing. *Plant Genetic Resources: Characterization and Utilization*, 16(4), 296-305.
  doi:10.1017/S1479262117000314
- 45. **Ambuko Jane**, F. Wanjiru, G. N. Chemining'wa, W.O. Owino and Eliakim Mwachoni (2017). Preservation of Postharvest Quality of Leafy Amaranth (*Amaranthus spp*) Vegetables Using Evaporative Cooling. Journal of Food Quality. Article ID 5303156, https://doi.org/10.1155/2017/5303156
- 46. James F. Thompson, Michael S. Reid, Lucia Felix, Irwin Donis-Gonzalez, Bertha Mjawa, and **Jane Ambuko** (2017). DryCard<sup>TM</sup> A Low-Cost Dryness Indicator for Dried Products.

  AIMS Agriculture and Food, 2017, 2(4): 339-344. doi: 10.3934/agrfood.2017.4.339
- 47. **Ambuko Jane**, Florence Wanjiru, Esther Karithi, Margaret Hutchinson, George Chemining'wa, Eliakim Mwachoni Britta Hansen, Lusike Wasilwa, Willis Owino and Ngoni Nenguwo (2018). Cold chain management in horticultural crops value chains: options for smallholder farmers in Africa. *Acta Horticulturae* 1225: 85-91
- 48. **Ambuko Jane**, Esther Karithi, Margaret Hutchinson, Lusike Wasilwa, Britta Hansen and Willis Owino (2018). Postharvest shelf life of mango fruits stored in a Coolbot<sup>™</sup> cold room. *Acta Horticulturae 1225*:193-197
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### F. BOOK CHAPTERS

- Willis Owino and Jane Ambuko. (2016). Advances in Ethylene Signal Transduction in Fruits and Vegetables, Book Chapter In Postharvest Ripening Physiology of Crops. Pp. 339 – 359
- **Jane Ambuko** and Willis Owino (2023). Towards Sustainable Transformation through Post-Harvest Management: Lessons from the Mango Value Chain in Kenya – in Press
- Jane Ambuko, Duncan Onyango Mbuge and Emmanuel Amwoka (2023). 'Effectiveness of
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#### G. POLICY BRIEFS

Esther Mujuka, Prof Jane Ambuko, Prof John Mburu and Prof Ackello Ogutu (2021). Investment in Technologies: Key Strategy for Postharvest Loss Reduction. KENYA POLICY BRIEFS, Vol 2 (1) 47-48

## H. PATENTS: REGISTERED UTILITY MODELS

- Jane Ambuko, Duncan Mbunge and Eliakim Mwachoni, Registered Utility Model Reinforced Brick Cooler, Registration Number KE/UM/2020/1454
- 2. **Jane Ambuko**, Duncan Mbunge and Eliakim Mwachoni, Registered Utility Model Evaporative Charcoal Cooler, Registration Number KE/UM/2020/1455
- 3. **Jane Ambuko**, Duncan Mbunge, Eliakim Mwachoni and Collins Kirui. Resized Brick Evaporative Cooler. IP registration number KE/U/2023/2216

### I. CONFERENCE PAPERS

#### I. PEER-REVIEWED

- Ambuko Jane, Klug Israel, Mujuka Esther, Mburu John, Ooko George, Amwoka Emmanuel, Gekonge Duke, Githumbi Rose, Okumu Carren, Ouko Robert. Postharvest Quality Management in Food Commodities used in School Meals: A Case Study of Schools in Kajiado and Kitui Counties of Kenya. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- Emmanuel Amwoka, Jane Ambuko, Rose Githumbi, and Esther Mujuka. Extent of Postharvest
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Robert Ouko and Duke Gekonge. Extent of Postharvest Losses and Critical Loss Points along the Bean Supply Chain in Kajiado and Kitui Counties of Kenya. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia

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- 7. Geoffrey Chomba, Jane Ambuko, Cecilia Onyango. Effect Of Different 1-Methylcyclopropene Formulations And Dosing On The Ripening Profile Of Tommy Atkins Mango Fruits. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- 8. Justa Kathambi, **Jane Ambuko**, Margaret Hutchinson and Willis Owino. Effectiveness of Coolbot™ Technology to Preserve Postharvest Quality and Extend Shelf Life of Tomato Fruits. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- 9. Karen Wambui, **Jane Ambuko**, George Chemining'wa and Willis Owino. Effect of Blanching and Drying techniques on quality characteristics of Collard (Brassica oleracea var. acephala) and Black night shade (*Solanum nigrum*). Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia

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- 11. Mourice Fodrick Omondi, **Jane Ambuko** and Dora Kilalo. Effect of Hot Water Treatment on Disinfestation for Fruit Flies and Quality Attributes in Mango Fruit. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- 12. Carren Atieno Okumu, Esther Mujuka John Mburu, **Jane Ambuko**, Israel Klug. Knowledge, Attitude and Practices relevant to Food Loss along the Bean Supply Chain in Kajiado and Kitui Counties, Kenya. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- 13. Winnie Yegon, Ishmael Mganda and **Jane Ambuko**. Cascading the African Union Continental Strategy for Postharvest Management to National Levels: Kenya's Case Study. Accepted for Presentation at the 4<sup>th</sup> All Africa Postharvest Congress & Exhibition, 19<sup>th</sup> to 22<sup>nd</sup> September 2023, Addis Ababa, Ethiopia
- 14. Jane Ambuko. Food Loss and Waste Reduction in Horticultural Value Chains: The Zero-loss Centers Approach. Feed the Future Innovation Labs Regional Conference. May 15-17, 2023. Windsor Hotel, Nairobi
- 15. Jane Ambuko. "Food Loss and Waste Reduction: For the People, for the Planet". Invited Keynote at the 1st Scientific Conference and Exhibition 2023, Kenya Agricultural and Livestock Research Organization. 27th to 31st March 2023, KALRO Headquarters
- 16. Pole F. N., Gweyi J. O., Ambuko J., and Wasilwa L. A. Effect of Pre-and Post-Harvest Handling Practices on Quality of Bixa Produced under Different Fertilizer Amendments. 1<sup>st</sup> Scientific Conference and Exhibition 2023, Kenya Agricultural and Livestock Research Organization. 27th

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- 19. Pole F.N., Gweyi J.O., Ambuko J. and Wasilwa L. Effect Of Organic And Inorganic Fertilizers On The Yields And Quality Of Bixa In Kwale COUNTY. 1<sup>st</sup> Scientific Conference and Exhibition 2023, Kenya Agricultural and Livestock Research Organization. 27th to 31st March 2023, KALRO Headquarters
- 20. Alice G. Nyoro\*, Onesmus. M. Kitonyo, **Jane. L. Ambuko**. Effect of integrated use of vermicompost and inorganic NPK fertilizer on growth and yield of strawberry. 1st Scientific Conference and Exhibition 2023, Kenya Agricultural and Livestock Research Organization. 27th to 31st March 2023, KALRO Headquarters
- 21. **Jane Ambuko**. Improving Postharvest Management Systems: for Food Security and Environmental Sustainability. Kenya Food Systems Conference, *4-5 April 2023, Safari Park Hotel, Nairobi*
- 22. **Jane Ambuko**, David Ameyaw, Penina Yumbya and Roberta Blankson. Challenges and Opportunities in East Africa's Horticulture Sector: A call to action for researchers from a stakeholders' perspective. Horticultural Association of Kenya (HAK), Annual Conference, AICAD, Kenya. 28<sup>th</sup> November to 2<sup>nd</sup> December 2022
- 23. Pole F.N, **Ambuko J**, Wasilwa, L.A, and Gweyi-Onyango Determination of mineral elements in the soil and their distribution in plant tissues of Bixa treated with organic and inorganic

- fertilizer amendments. Horticultural Association of Kenya (HAK), Annual Conference, AICAD, Kenya. 28<sup>th</sup> November to 2<sup>nd</sup> December 2022
- 24. Edwin Ademba, Jane Ambuko and Margaret Hutchinson. Effective dosing range for different 1Methylcyclopropene (1-MCP) formulations to Extent the shelf-life of Hass avocado fruits. Horticultural Association of Kenya (HAK), Annual Conference, AICAD, Kenya. 28<sup>th</sup> November to 2<sup>nd</sup> December 2022
- 25. Geoffrey Chomba, Jane Ambuko and Cecilia Onyango. Effect of different 1methylcyclopropene Formulations on the ripening profile of Tommy Atkins mango. Horticultural Association of Kenya (HAK), Annual Conference, AICAD, Kenya. 28<sup>th</sup> November to 2<sup>nd</sup> December 2022
- 26. **Jane Ambuko**, Emmanuel Amwoka, Margaret Hutchinson and Willis Owino. Zero-Loss Centers: Concept for Postharvest Loss Reduction and Better Market Access for Smallholder Horticultural Farmers. Invited Keynote, Presented at the 31<sup>st</sup> International Horticultural Congress (IHC), 14-20<sup>th</sup> August, Angers, France
- 27. Emmanuel Amwoka, **Jane Ambuko**, Margaret Hutchinson and Willis Owino. Simple Cold Chain for Smallholder Horticultural Farmers: Case Study in Mango Fruit. Presented at the 31<sup>st</sup> International Horticultural Congress (IHC), 14-20<sup>th</sup> August, Angers, France
- 28. Mwarome Jumbale, M.W. Okoth, George Ooko Abong', Jane Ambuko, Duke Gekonge.
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  Ghana, June 6-10, 2022
- 29. Mbusa Sikwaya, George Ooko Abong, **Jane Ambuko**, and Duke Omayio Gekonge. Utilization of Moringa Leaf Extract for Micronutrient Enrichment of Mango Nectar. Presented at the Consortium of Postharvest Loss Reduction, Annual Symposium, Kwame Nkurumah University, Ghana, June 6-10, 2022

- 30. Mujuka, E., Mburu, J., Ogutu, A., & **Ambuko, J.** Willingness to pay for postharvest technologies among smallholder mango farmers in Kenya. A Paper presented at the 31<sup>st</sup> Virtual International Conference of Agricultural Economists. 17 31 Aug, 2021.
- 31. **Jane Ambuko**. Food Loss and Waste Reduction: Why it matters for sustainable food systems.

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- 32. **Jane Ambuko Lukhachi**, George Abong, Duke Gekonge, Emmanuel Amwoka and Bruce Hamaker Strengthening Small-scale Horticultural Processors through the Hub and Spoke Innovation Model: A Case Study of Mango Processing in Kenya. Presented at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 33. Emmanuel Amwoka, **Jane Ambuko**, Hutchinson Jesang', and Willis Owino. Evaluation Of Effectiveness Of Low-Cost Cold Storage Options To Preserve Post-Harvest Quality Of Mango. Presented at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 34. Justa kathambi, **Jane Ambuko**, <sup>1</sup>Margaret Hutchinson, willis owino. Effect Of Coolbot<sup>tm</sup> Cold Storage And Modified Atmosphere Packaging On Shelf Life And Postharvest Quality Of Kale. Presented at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 35. Karen Wambui, **Jane Ambuko**, George Chemining'wa and Willis Owino Evaluation of the Harvest Stage and Nitrogen Fertilization on Postharvest Shelf life of Black Night Shades (Solanum nigrum) and Kales (Brassica oleracea). Presented at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 36. N.M. Bitange, G. N. Chemining'wa, **J. L. Ambuko**, and W. O. Owino Effects Of Mode And Timing Of Calcium Application On Tissue Calcium And Shelf Life Of Mango Fruits. Presented

- at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 37. Duke Omayio, George Abong', **Jane Ambuko** and Emmanuel Amwoka. Opportunities and Challenges in Processed Local Fruits and Vegetables: the Case of Small-Scale Food Processors among Kenya Farmers. Presented at the 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition, hosted by the African Union Commission, Virtual, September 13-16, 2021
- 38. Jacinta Muiruri1, Jane Ambuko, Richard Nyankanga and Willis O. Owino. Maturity Indices of Specific Mango Varieties produced at medium altitude agro-ecological zone in Kenya. .
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- 39. **Jane Ambuko**, Emmanuel Amwoka, George Abong', Catherine Kunyanga, Duke Gekonge and Isaac Maitha. Small-scale processing of mango fruits: putting more money in farmers' pockets while enhancing access to nutritious fruit products. 4<sup>th</sup> All Africa Horticultural Congress, International Horticultural Society, Senegal, 29-31 March 2021
- 40. Emmanuel M. Amwoka, **Jane L. Ambuko**, Hutchinson M. Jesang', and Willis O. Owino. Comparative Evaluation of the Effectiveness of Selected Storage Technologies to Preserve Postharvest Quality of Mango Fruit. 4<sup>th</sup> All Africa Horticultural Congress, International Horticultural Society, Senegal, 29-31 March 2021
- 41. Peninah Yumbya, Jane Ambuko, Margaret Hutchinson, Willis Owino, John Juma, Eunice Machuka, Mutuku J. Musembi. Transcriptome analysis to elucidate hexanal's mode of action in preserving the post-harvest quality of banana fruits. 4<sup>th</sup> All Africa Horticultural Congress, International Horticultural Society, Senegal, 29-31 March 2021
- 42. N.M. Bitange, G. N. Chemining'wa, **J. Ambuko**, and W. O. Owino. Effect of Source and Time of Calcium Application on Postharvest Quality of Mango Fruits. 4<sup>th</sup> All Africa Horticultural Congress, International Horticultural Society, Senegal, 29-31 March 2021
- 43. Naomi Mbondo, Willis Owino, Jane Ambuko and Daniel Sila. Degradation kinetics of beta

- carotene and antioxidant capacity during drying of African eggplant. 4<sup>th</sup> All Africa Horticultural Congress, International Horticultural Society, Senegal, 29-31 March 2021
- 44. **Jane Ambuko**. Value addition of vegetables for increased access and consumption by urban consumers. Power on Your Plate Conference/Summit, 25-28 January 2021, Hosted by World Vegetable Center, Arusha, Tanzania
- 45. Willis O. Owino, Elias K. Mibei, Grace M. Wacheke, Jane Ambuko and James J. Giovannoni. Metabolite diversity of fruits of selected African eggplant accessions for improved health and nutrition. Power on Your Plate Conference/Summit, 25-28 January 2021, Hosted by World Vegetable Center, Arusha, Tanzania
- 46. Jane Ambuko. Zero Loss Centers: A Feasible Strategy for Postharvest Loss Reduction and Better Market Access for Smallholder Horticultural Farmers. Presented at the HortiGreen Conference, 5 – 7 October 2020
- 47. **Jane Ambuko**. Keynote: Climate-smart postharvest technologies to reduce food loss and waste in horticultural value chains: Case study Of 'Zero Loss' Centres. Horticultural Association of Kenya Conference, December 1st 4th, 2020
- 48. **Jane Ambuko.** Group/Village Aggregation Centers: Strategy for Food Loss Reduction, Better Market Access and Food Security for Smallholder Farmers. Presented at the World Sustainability Summit, Switzerland (Virtual). 15-17<sup>th</sup> September 2020
- 49. Esther Mujuka, John Mburu, Chris-Ackello Ogutu, **Jane Ambuko**. Willingness to Pay for Postharvest Technologies and its Influencing Factors among Smallholder Mango Farmers in Kenya. Presented at Tropentag, September 9 11, 2020, Germany, virtual conference
- 50. Elizabeth Okello, George Chemining'wa, **Jane Ambuko**. Effect of Pinching Frequency on Growth and Yield of Selected Spider Plant Accessions. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 51. Enock Mosenda, George N. Chemining'wa, **Jane L. Ambuko**, and Onesmus M. Kitonyo. Assessment of Agronomic Traits of Selected Spider Plant Accessions. Presented at Agro 2019

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- 52. Enock Mosenda, George N. Chemining'wa, and **Jane L. Ambuko**. Effect of Water Stress on Growth and Yield of Selected Spider Plant Accessions. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 53. Jane I. Masambia, George N. Chemining'wa, Jane L. Ambuko, and Willis O. Owino. Effects of Organic and Inorganic Fertilizers on Growth, Yield and Nutritional Quality of Slenderleaf. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 54. Martin M. Waiti, George N. Chemining'wa, and **Jane L. Ambuko**. Effect of Water Stress on Growth and Yield Components of Indigenous and Commercial Tomato Genotypes. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 55. Martin M. Waiti, George N. Chemining'wa and **Jane L. Ambuko**. Effect of Nitrogen Fertilization on Growth and Yield of Selected Tomato Accessions and Commercial Varieties. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 56. Mary W. Gateri, Richard Nyankanga, **Jane Ambuko** and Anne W. Muriuki. Effect of Rate and Time of Nitrogen Topdressing on the Quality and Storability of Onions. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 57. Naphis. M. Bitange, George. N. Chemining'wa, **Jane Ambuko** and Willis. O. Owino. Effect of Calcium Nutrition on Jelly Seed Occurrence and Calcium Distribution in 'Van Dyke' Mango Fruit Tissues. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 58. Boen Timon, **Jane Ambuko**, Margaret Jesang Hutchinson and George Chemining'wa. Effect of Harvest Maturity on Quality of Avocado Produced Under Two Agro- Ecological Conditions in Kenya. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 59. Emmanuel Amwoka, Jane Ambuko, Hutchinson Jesang' and Willis Owino. Evaluation of Low-Cost Cold Storage Options to Preserve Post-Harvest Quality of Mango. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 60. Sharon N. Inzaule, Jane Ambuko, William M.Muiru and Willis Owino. Effectiveness of Sodium

- Bicarbonate and Chlorine-Based Sanitizers on Postharvest Alternaria Alternata Rots in Tomato Fruits. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 61. **Jane Ambuko**. Processing Fruits and Vegetables to Increase Profitability and Reduce Postharvest Losses in Smallholder Horticulture while Enhancing Access for Consumers. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 62. Justa kathambi, Jane Ambuko, Margaret Hutchinson and Willis Owino. Effectiveness of Selected Storage Technologies to Preserve Postharvest Quality and Extend Shelf Life of Tomato and Kales. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 63. Maina Benson, **Ambuko Jane**, Hutchinson Margaret and Owino Willis. The Effect of Waxing Technologies on Postharvest Quality of 'Apple' Mango Fruit Stored under Different Storage Conditions. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 64. Peninah Yumbya, Margaret Hutchinson, **Jane Ambuko** and Willis Owino. Effects of 'Enhanced Freshness Formulations (EFF)' on the Post-harvest Quality of Banana Fruits (Musa spp) in Kenya. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 65. Samuel L Caleb and Jane Ambuko. Effect of Modified Atmosphere Packaging on the Shelf Life of Carrot and Sweet Paper under Different Storage Conditions. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 66. Ann W. Githaiga and Jane Ambuko. Effectiveness of Waxing to Extend the Postharvest Shelf Life of 'Kent' Mango Fruit. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya.
- 67. Lenton Mwenesi and **Jane Ambuko**. Effects of Waxing on the Shelf life of Hass and Fuerte Avocado Fruits. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 68. Antony M. Bundi, John Mburu, Stephen Mbogoh and **Jane Ambuko**. Factors Influencing the Adoption of Pre-harvest Practices among Mango Farmers in Embu and Machakos. Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya
- 69. Esther Mujuka, John Mburu, Ackello Ogutu and Jane Ambuko. Returns to Investment in

Postharvest Loss Reduction Technologies among Mango Farmers in Embu County, Kenya.

Presented at Agro 2019 Conference, 22-24 October, 2019, Nairobi Kenya

- 70. **Jane Ambuko**, Emmanuel Amwoka, Isaac Nyangena, Willis Owino, Margaret Hutchinson, Catherine Kunyanga, George, Chemining'wa and John Mburu. Exploiting the Potential of Smallholder Horticulture through Aggregation and Processing Centers: Case Study of Mango in Kenya. Book of Abstracts pg 93. Presented at the 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition, September 17-20, 2019. Addis Ababa, Ethiopia
- 71. Emmanuel Amwoka, **Jane Ambuko**, Hutchinson Jesang' and Willis Owino. Effectiveness of Harvest Practices and Technologies to Maintain Cold-Chain and Extend Shelf Life of Mango Fruit. Book of abstracts Pg 42. Presented at the 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition, September 17-20, 2019. Addis Ababa, Ethiopia
- 72. Margaret Jesang Hutchinson, John Robert Ouko, **Jane Ambuko**, Subramanian, Willis Owino and Jayasankar. Effects of Hexanal Spray on the Postharvest Life and Quality of Papaya Fruit in Kenya. Book of Abstracts Pg 85. Presented at the 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition, September 17-20, 2019. Addis Ababa, Ethiopia
- 73. Loreto Atieno, Willis Owino, Elijah .M. Ateka and **Jane Ambuko**. Comparability of Two Different Coating Application Methods on Cassava Postharvest. Book of Abstracts Pg 67. Presented at the 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition, September 17-20, 2019. Addis Ababa, Ethiopia
- 74. Isaac Nyangena, Willis Owino, **Jane ambuko** and Samuel Imathiu. Effect of Selected Drying Pretreatments on Physical and Nutritional Quality Characteristics of Dried 'Apple' Mango Chips. Book of Abstracts Pg 41. Presented at the 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition, September 17-20, 2019. Addis Ababa, Ethiopia
- 75. **Ambuko Jane**. Enhancing Access to African Indigenous Vegetables for Urban Consumers through Value Addition. Africa Indigenous Vegetables: Presented at From Income Generation to Health and Nutrition Conference. Four Points Hotel, Nairobi, July 18-19, 2019

- 76. Enoch Mosenda, G. Chemining'wa and J. Ambuko. Effect of Water Stress on Growth and Yield Components of Selected Spider Plant Accessions. Africa Indigenous Vegetables: Presented at From Income Generation to Health and Nutrition Conference. Four Points Hotel, Nairobi, July 18-19, 2019
- 77. Tembe K, **J. Ambuko**, G. Chemining'wa, W. Owino and S. Lagat. Variation in Morphological and Agronomic Traits of Selected African Eggplant Accessions. Africa Indigenous Vegetables: Presented at From Income Generation to Health and Nutrition Conference. Four Points Hotel, Nairobi, July 18-19, 2019
- 78. Mibei E.K, W. Owino, G. M. Wacheke, J Ambuko, A.N. Onyango and J.J. Giovannoni. Metabolite Diversity of Fruits of Selected African Eggplant Accessions for Improved Health and Nutrition. Africa Indigenous Vegetables: Presented at From Income Generation to Health and Nutrition Conference. Four Points Hotel, Nairobi, July 18-19, 2019
- 79. Esther Mujuka, John Mburu, Chris-Ackello Ogutu, **Jane Ambuko**. 'Returns to Investment in Postharvest Loss Reduction Technologies among Mango Farmers in Embu County, Kenya. Tropentag, September 18 20, 2019 in Kassel, Germany
- 80. **Ambuko Jane**, Esther Karithi, Margaret Hutchinson and Willis Owino. Low-cost Cold Storage Technologies to Preserve Postharvest Quality of Fruits and Vegetables. Presented at the LASER-PULSE Conference, Speke Hotel, Uganda. May 6-8, 2019
- 81. **Jane Ambuko**, Emmanuel Amwoka, Margaret Hutchinson, George Chemining'wa, Catherine Kunyanga, John Mburu and Willis Owino. From the Lab to Land: Taking Postharvest Management Solutions to Horticultural Farmers through Aggregation Centers. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 82. **Jane Ambuko**. Postharvest Training in Kenya: Universities' Role to Address the Knowledge and Skills Gap in Postharvest Management. Key Note Presentation at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 83. Benson Maina, Jane Ambuko, Margaret Hutchinson and Willis Owino Effect of Different

- Waxing Technologies on Shelf Life of Mango Fruits Stored under Different Storage Conditions.

  Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 84. Emmanuel Amwoka, **Jane Ambuko**, Hutchinson Jesang' and Willis Owino. Effectiveness of Cold Chain Management Practices to Extend Shelf Life of Mango Fruit. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 85. Naphis Bitange, George Chemining'wa, Jane Ambuko, and Willis Owino Effect of pre and post harvest application of calcium chloride on the shelf life of physiologically mature mango fruits.
  Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 86. Sam Koile, **Jane Ambuko**, George N. Chemining'wa Effect of Fertilizer application, Time of Pinching and Harvesting Method on Growth, Yield and Nutritional quality of Cowpeas. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 87. Inzaule, S.N, **Ambuko, J.**, Muiru. W.M & Owino. W.O. Effectiveness of Sodium Bicarbonate and Chlorine-based Sanitizers on Black Mould Disinfection in Tomato Fruits. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 88. Isaac Nyangena, Willis Owino, **Jane Ambuko** and Samuel Imathiu<sup>-</sup> Effect of Selected Drying Pretreatments on Physical Quality Attributes of Dried Mango Chips. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 89. Waiti M.M., Chemining'wa G.N and **Ambuko J.L**. Effect Of Water Stress On Yield And Yield Components Of Selected African Tomato (*Solanum Lycopersicum*) Accessions And Kenyan Commercial Varieties. Presented at the 6th RUFORUM Biennial Conference, 22-26th October, 2018, KICC, Nairobi Kenya
- 90. Jane Ambuko, Catherine Kunyanga, Willis Owino, Margaret Hutchinson, George Chemining'wa, John Mburu and Emmanuel Amwoka. Group aggregation can contribute to postharvest loss reduction and better market access for smallholder farmers: mango case study.

- Presented at the 30<sup>th</sup> International Horticultural Congress, Instanbul, Turkey, 12-16<sup>th</sup> August, 2018
- 91. Caroline Chemutai, **Jane Ambuko** and George Chemining'wa. Water Stress Promotes Phenolic compounds and Antioxidant Accumulation at the Expense of Growth, Yield and Vitamins in African Nightshades. Presented at the 30<sup>th</sup> International Horticultural Congress, Instanbul, Turkey, 12-16<sup>th</sup> August, 2018
- 92. Willis Owino, Naomi Ms. Mbondo, Jane Ambuko, Daniel Sila. Effect of drying methods on the retention of bioactive compounds in African eggplant. Presented at the 30<sup>th</sup> International Horticultural Congress, Instanbul, Turkey, 12-16<sup>th</sup> August, 2018
- 93. Nikuze Tefania, Elijah M. Ateka, Willis Owino and Jane Ambuko. Management of bacterial (*Ralstonia solanaceerum*) wilt in tomato (*Lycopersicon esculentum* Mill.) using resistant African eggplant (*Solanum spp*) rootstocks. 2<sup>nd</sup> Phytosanitary Conference, 4<sup>th</sup> to 8<sup>th</sup> June 2018, at KEPHIS Headquarters, Nairobi, Kenya.
- 94. **Ambuko Jane:** The 1<sup>st</sup> All Africa Postharvest Congress and Exhibition Lessons, Recommendations and Way Forward. Lead Paper Presented at the Ethiopian Society of Postharvest Management. Addis Ababa, Ethiopia. 26-27<sup>th</sup> January, 2018.
- 95. **Ambuko, Jane**, Esther Karithi, Hutchinson Margaret, and Owino, Willis. The coolbot™ technology: opportunities and challenges for smallholder horticultural farmers in Africa.

  Presented at the VI Postharvest Unlimited Conference, October 17-20, 2017, Madrid, Spain
- 96. **Jane Ambuko**, Jacinta Muiruri, Richard Nyankanga and Willis O. Owino. Effect of maturity at harvest on postharvest quality attributes of mango fruit. Presented at the VI Postharvest Unlimited Conference, October 17-20, 2017, Madrid, Spain
- 97. **Jane Lukhachi Ambuko**, Willis Omondi Owino and Agoye Dylan Burgess. Bagging can reduce time to maturity and improve visual quality of banana (Musa Spp). Presented at the VI Postharvest Unlimited Conference, October 17-20, 2017, Madrid, Spain
- 98. Willis Owino, Loreto Oduor, Jane Ambuko, Elijah Ateka. Edible surface coatings extend the

- postharvest life and quality of cassavaroots. Presented at the VI Postharvest Unlimited Conference, October 17-20, 2017, Madrid, Spain
- 99. Willis Owino, Kukom Edoh, **Jane Ambuko**, Hippolyte Affognon, Christopher Mutungi and Daniel Sila. Communicating Food Waste and Prevention Strategies in an African Context. Presented at the Cereal 17 Conference, San Diego, California, USA, October 8-11, 2017
- 100. **Jane Ambuko**. Postharvest management: Universities' role in training and capacity development to address the 'skills gap' in horticultural value chains. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 101. **Jane Ambuko**, George. N. Chemining'wa, Eliakim Mwachoni, Florence Wanjiru, Willis.O. Owino and Ngoni Nenguwo Evaporative cooling technologies: simple and effective cooling alternatives for smallholder horticultural farmers. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 102. **Jane Ambuko**, Esther Karithi, Margaret Hutchinson, Willis Owino, Lusike Wasilwa and Britta Hansen. The Coolbot<sup>TM</sup>: a low-cost cold storage alternative for smallholders in developing countries. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 103. **Jane Ambuko**, Stephen Maloba, Margaret Hutchinson and Willis O. Owino Application of off-season flower induction chemicals to address seasonality in mango fruiting and the associated postharvest losses. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 104. Yumbya, P.M, Hutchinson, M.J, **Ambuko, J**, Owino, W and Subramanian, J. Efficacy of Hexanal Application on the Postharvest shelf life and Quality of Banana Fruits (Musa spp). Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 105. Ouko, J.R, Hutchinson, M.J, Ambuko, J, Owino, W and Subramanian, J. Effects of Hexanal

Formulations on Prolonging the Postharvest Life and Quality of Papaya Fruit. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya

- 106. Jacinta Muiruri, **Jane Ambuko**, Richard Nyankanga and Willis O. Owino. Determination of Maturity Indices of three Mango Varieties produced in Embu County of Kenya. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 107. Jacinta Muiruri, Jane Ambuko, Richard Nyankanga and Willis O. Owino. Effect of Harvest Maturity on the Quality Attributes of Solar-Dried Mango Products of Selected Mango Varieties.
  Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 108. Naomi N. Mbondo, **Jane Ambuko**, Daniel N. Sila and Willis O. Owino. Effect of Drying on Degradation of Bioactive Compounds in African Eggplant. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 109. Loreto Atieno, Elija M. Ateka, **Jane Ambuko** and Willis Owino. Effect of Guar and Xanthan Gum Coatings on the Shelf Life and Quality of Cassava Roots. Presented at 1<sup>st</sup> All Africa Postharvest Congress and Exhibition, 28<sup>th</sup> to 31<sup>st</sup> March, 2017. Safari Park Hotel, Nairobi, Kenya
- 110. **Jane Ambuko**. Postharvest management: addressing the 'skills gap' in horticultural value chains. Presented at the Horticultural Association of Kenya Annual Conference, Chuka University, December 2016.
- 111. Amwoka Emmanuel M and **Ambuko Jane**. Effect of inorganic sanitizing agents on postharvest rotting of sweet paper (*capsicum annuum*). Presented at the Horticultural Association of Kenya Annual Conference, Chuka University, December 2016
- 112. Agoye Dylan Burgess and Ambuko Jane. Effect of Pre-Harvest Bagging on Visual Quality

- of Banana Fruits (*Musa Spp*). Presented at the Horticultural Association of Kenya Annual Conference, Chuka University, December 2016
- 113. **Jane Ambuko**, Florence Wanjiru, Esther Karithi, Margaret Hutchinson, George Chemining'wa, Eliakim Mwachoni Britta Hansen, Lusike Wasilwa, Willis Owino and Ngoni Nenguwo Cold chain management in horticultural crops value chains: options for smallholder farmers in Africa. Presented at the All Africa Horticultural Congress, Ibadan, Nigeria. August 4-7, 2016
- 114. **Jane Ambuko**, G. N. Chemining'wa, Eliakim Mwachoni, Florence Wanjiru, W.O. Owino and N. Nenguwo Efficacy of a modified zero energy brick cooler technology to preserve the postharvest quality of leafy Amaranth vegetables. Presented at the All Africa Horticultural Congress, Ibadan, Nigeria. August 4-7, 2016
- 115. Jane Ambuko, Esther Karithi, Margaret Hutchinson, Lusike Wasilwa, Britta Hansen and Willis Owino. Postharvest shelf life of mango fruits stored in a Coolbot™ cold room. Presented at the All Africa Horticultural Congress, Ibadan, Nigeria. August 4-7, 2016
- Willis Owino, J. Ambuko, N. Nenguwo and R. Mwendwa. Postharvest quality and nutrition characterization of selected commercially grown tomato varieties. ISHS- All Africa Horticultural Congress, IITA, Ibadan Nigeria. 7<sup>th</sup> 12<sup>th</sup> August 2016. Book of Abstracts Pg. 50
- 117. Mibei E.K., **Ambuko J**., Giovannoni J., Onyango A.N. and Owino W.O. Metabolomic Analysis to Evaluate the Effect of Drought Stress on Selected African Eggplant Leaves. SolGenomics Conference 2016, UC Davis, USA. Book of Abstracts pg 123
- 118. Ambuko Jane, Kenneth Tembe, George Chemining'wa and Willis Owino. 2016. Effect of Water Stress on Growth, Yield and Nutritional Quality of Selected African Tomato Landraces.
  Presented at the 13<sup>th</sup> Annual Solanacea Conference, University of California USA, September 12-16.
- 119. Willis O. Owino, Lagat Samson, **Jane Ambuko** and George Cheminingwa (2016). Variations in Morphological and Agronomic Traits among African Eggplant Accessions.

- Presented at the 13<sup>th</sup> Annual Solanacea Conference, University of California USA, September 12-16.
- 120. Jane Ambuko. Good Postharvest Handling Practices in Fruits and Vegetables for Nutritional Quality Preservation. Presented at 2nd International Conference on Biodiversity for Food and Nutrition. Safari Park Hotel, Nairobi, Kenya. 23rd November, 2015
- 121. Kenneth O. Tembe, George N. Chemining'wa, Jane Ambuko and Willis Owino. Variation in Nutritional Quality of African Tomato Landraces (Solanum Lycopersicum) as Affected by Water Stress. Presented at 2nd International Conference on Biodiversity for Food and Nutrition. Safari Park Hotel, Nairobi, Kenya. 23rd November, 2015
- 122. Samson Lagat, George N. Chemining'wa, **Jane Ambuko** and Willis Owino. Effects of water stress on growth, yield and nutrition of African eggplant Accessions. Presented at 2nd International Conference on Biodiversity for Food and Nutrition. Safari Park Hotel, Nairobi, Kenya. 23rd November, 2015
- 123. Daniel. O. Wasonga, Jane. L. Ambuko, George N. Chemining'wa and Bridget. G. Crampton. Evaluation Of The Diversity In Agronomic Traits Of Kenyan And South African Spider Plant Accessions For Crop Improvement. Presented at 2nd International Conference on Biodiversity for Food and Nutrition. Safari Park Hotel, Nairobi, Kenya. 23rd November, 2015
- 124. Kenneth Oduor, **Jane Ambuko**, George Chemining'wa, Willis O. Owino. Phenotypic Characterization in the African Tomato (Solanum lycopersicum) Landraces for Crop Improvement. Presented at the Horticultural Association of Kenya Annual Conference, KALRO Kandara, 1<sup>st</sup> to 4<sup>th</sup> December 2015.
- 125. Sam Koile, Jane Ambuko, George N. Chemining'wa. Effect Of Fertilizers, Time Of Pinching And Harvesting Method On Growth And Yield Of Cowpea. Presented at the Horticultural Association of Kenya Annual Conference, KALRO Kandara, 1st to 4th December 2015.

- 126. Samson Lagat, George N. Chemining'wa, **Jane Ambuko** and Willis Owino. Morphological and agronomic characterization of the African eggplant Accessions. Presented at the Horticultural Association of Kenya Annual Conference, KALRO Kandara, 1<sup>st</sup> to 4<sup>th</sup> December 2015
- 127. **Jane Ambuko**, Esther Kariithe, M.J. Hutchinson, B. Hansen, L. Wasilwa and W.O. Owino. 'Coolbot': An Innovative Low-Cost Cold Storage Solution for Smallholder Farmers. Presented at the Horticultural Association of Kenya Annual Conference, KALRO Kandara, 1<sup>st</sup> to 4<sup>th</sup> December 2015
- 128. **Jane Ambuko**, F. Wanjiru, G. N. Chemining'wa, E. Mwachoni, W.O. Owino and N. Nenguwo Efficacy of a modified zero energy brick cooler technology to preserve the postharvest quality of leafy vegetables. Presented at the Horticultural Association of Kenya Annual Conference, KALRO Kandara, 1<sup>st</sup> to 4<sup>th</sup> December 2015
- 129. Jane Ambuko. Good Postharvest Handling Practices in Fruits and Vegetables for Nutritional Quality Preservation. Presented at the 2nd International Conference on Biodiversity for Food and Nutrition. Safari Park Hotel, Nairobi, Kenya. 23rd November, 2015
- 130. Jane Ambuko, Florence Wanjiru, Esther Karithi, Margaret Hutchinson, Britta Hansen, Lusike Wasilwa, Willis Owino and Ngoni Nenguwo. Low-cost cold storage options for smallholder farmers to reduce postharvest losses in fruits and vegetables. The First International Congress on Postharvest Loss Prevention, Oct 4-7, 2015, Rome, Italy. Conference proceedings Pg 126 128
- 131. **Jane Ambuko**, Florence Wanjiru, Esther Karithi, Margaret Hutchinson, Britta Hansen, Lusike Wasilwa, Willis Owino and Ngoni Nenguwo. Efficacy of a modified zero energy brick cooler technology to preserve the postharvest quality of leafy vegetables. Oral Presentation at the University of Nairobi Innovation Week, 3<sup>rd</sup> to 5<sup>th</sup> August 2015

- 132. **Jane Ambuko**, Esther Kariithe, M.J. Hutchinson, B. Hansen, L. Wasilwa and W.O. Owino. 'Coolbot': An Innovative Low-Cost Cold Storage Solution for Smallholder Farmers. Poster Presented at the University of Nairobi Innovation Week, 3<sup>rd</sup> to 5<sup>th</sup> August 2015
- 133. **Ambuko Jane**, Kemunto O. Nancy, Margaret Hutchinson and Willis. O. Owino. Response Of Mango Fruit To 1-Methylcyclopropene As Affected By Agro-ecological Zone And Maturity Stage. Oral Paper Presentation at the 29th International Horticultural Congress, 17th to 22nd August, 2014, Brisbane, Australia
- 134. **Ambuko Jane,** Kemunto O. Nancy, Margaret Hutchinson and Willis. O. Owino. Comparative Evaluation Of Quality And Sensory Characteristics Of 'Apple' Mango Fruits Produced Under Different Agro-Ecological Zones In Kenya. Poster Presentation at the 29th International Horticultural Congress, 17th to 22nd August, 2014, Brisbane, Australia
- 135. Jane Ambuko, Lilian Ouma, Solomon Shibairo, Margaret Hutchinson and Joseph Njuguna, Willis O. Owino. A Comparative Evaluation Of Maturity Indices Of Mango Fruits Produced In Two Contrasting Agro-Ecological Zones Of Kenya. Presented at the 4<sup>th</sup> RUFORUM Biennial Conference, 21<sup>st</sup> to 25<sup>th</sup> July, 2014. VIP Grand Maputo Hotel, Maputo, Mozambique
- 136. **Ambuko Jane.** Saving the 'Missing Third' in Food Supply Chains; the Case of Fruit and Vegetables. Lead paper presented at the Horticultural Association of Kenya Conference, Meru University, 2nd to 6th December, 2013.
- 137. **Ambuko Jane**, Tei Mukunya and Kirk Dolan. Effect of Blanching Time and Drying Method on Physical and Rehydration Properties of Collard Greens (*Brassica oleracea* L). Presented at the Horticultural Association of Kenya Conference, Meru University, 2nd to 6th December, 2013.
- 138. **Ambuko Jane.** 'Postharvest Loss Management in Perishables'. Invited presentation at the Postharvest Handling of Vegetables Workshop organized by the AVDRC The World Vegetable Center. 20th to 21st August, 2013, Utalii Hotel, Nairobi.
- 139. **Ambuko, Jane**, Penina Yumbya, Solomon I. Shibairo, Margaret Hutchinson and Willis. O. Owino. Efficacy of 1-Methylcyclopropene (1-MCP) in Purple Passion (*Passiflora edulis* Sims

- Fruits as Affected by Dosage and Maturity Stage. Presented at the American Society of Horticultural Science Conference, Palm Desert Resort, California, USA. ASHS 2013 On-line Book of Abstracts Pg 67- 68
- Ambuko, Jane, Penina Yumbya and Willis. O. Owino. Evaluation of Quality and Sensory Attributes of Purple Passion Fruit (*Passiflora Edulis* Sims) Harvested at Different Stages of Maturity. Presented at the American Society of Horticultural Science Conference, Palm Desert Resort, California, USA. ASHS 2013 On-line Book of Abstracts Pg 151-152
- 141. Jane Ambuko, Willis O. Owino, Solomon Shibairo, Margaret Hutchinson and Joseph Kori Njuguna. Improving profitability of the mango value chain through strategies for off-season flower induction, reliable maturity indices and applicable postharvest handling technologies. Project Poster Presented at the 3<sup>rd</sup> RUFORUM Biennial Regional Conference. Imperial Resort Beach Hotel Entebbe, Uganda. 24<sup>th</sup> 28<sup>th</sup> September, 2012.
- 142. **Ambuko, J**, R.W. Githiga, M.J. Hutchnison, H. Gemma and W.O. Owino. Effect of maturity stage and variety on the efficacy of 1-MCP treatments in mango fruits. Presented at the All Africa Horticultural Congress (AAHC), Skukuza, South Africa (15<sup>th</sup> 20<sup>th</sup> January, 2012)
- 143. Baraza, A, J. Ambuko, Y. Kubo and W. O.Owino. Effect of Agro-Ecological Zone and Maturity on the Efficacy of 1-Methylcyclopropene (1-MCP) in Extending Postharvest Life of Purple Passion (Passiflora Edulis Sims) Fruits. Presented at the All Africa Horticultural Congress (AAHC), Skukuza, South Africa (15<sup>th</sup> 20<sup>th</sup> January, 2012)
- 144. **Ambuko, J,** Y. Sekozawa, S. Sugaya and H. Gemma. 2011. Effect of preharvest factors on the quality and postharvest characteristics of the banana. Presented at the aGRO 2011 Biennial Conference, Faculty of Agriculture, University of Nairobi. Book of Abstracts pg 139
- 145. Hutchinson, M.J., Ambuko, J., Nyikal, R. and Ruto, G. 2011. Essential Services Package of Support to Improve Productivity of Women Smallholder Farmers in Kenya. aGRO 2011 Biennial Conference Book of Abstracts pg. 128
- 146. **Ambuko, J.** Pest risk analysis to facilitate trade in horticultural commodities; what role can

the academia play? A plenary paper presented at the Horticultural Association of Kenya Workshop held at AICAD, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Juja, Kenya. 8<sup>th</sup> – 11<sup>th</sup> December 2010.

### II. NON-PEER REVIEWED SCHOLARLY PRESENTATIONS

- Jane Ambuko. Role of public sector in supporting consumer health and agricultural trade: Research and Academia. GLOBALG.A.P TOUR STOP conference. 28–30 March 2023, Safari Park Hotel, Nairobi
- 2. Jane Ambuko. Overview of the Current Ecosystem on Post-harvest Loss and Food Waste in Kenya. National Task Team for Postharvest Management Strategy – Consultative Meeting and Write shop, February 12-17, 2023. Eagle Palace Hotel, Nakuru
- **3. Jane Ambuko.** Food Loss and Waste Reduction: Why it Matters for Food & Nutrition Security and Environment. Sensitization Workshop for Joint Agriculture Sector Steering Committee

  Technical Working Groups for Agriculture, 2<sup>nd</sup> May, 2023. Eagle Palace Hotel, Nakuru
- **4. Jane Ambuko.** Food Loss and Waste Reduction: Why it Matters for Food & Nutrition Security and Environment. Stakeholder Sensitization on Food Loss and Waste Reduction during Public Participation for the Zero Draft Strategy on Post-Harvest Management. 6<sup>th</sup> June, 2023, Candela Hotel, Siaya Town
- 5. Jane Ambuko. Food Loss and Waste Reduction: Why it Matters for Food & Nutrition Security and Environment. Stakeholder Sensitization on Food Loss and Waste Reduction during Public Participation for the Zero Draft Strategy on Post-Harvest Management. 8<sup>th</sup> June, 2023, Noble Hotel, Eldoret Town
- **6. Jane Ambuko.** Overview of Post-harvest Management in Kenya: Challenges/Gaps and Opportunities. Presented at the Stakeholders Consultation/Inception Workshop organized by FAO-Kenya. Pride Inn Azure Hotel, 29<sup>th</sup> November 2022

- 7. Jane Ambuko; Postharvest Loss Management: Addressing Data Gaps in Horticultural Value Chains. Fruits, Vegetables & Herbs Conference. Safari Park Hotel, 9-10 Nov 2022
- 8. Jane Ambuko: Postharvest Food Loss and Waste during the COVID-19 Pandemic. UON-FAO Webinar on Food and Nutrition Security under Covid: Technical and Legal Considerations with a Focus on Kenya. 30<sup>th</sup> April 2020
- 9. Jane Ambuko: Strengthening Small Scale Processors to Reduce Postharvest Losses and Improve Profitability of Smallholder Horticulture. Presented at the FPEAK Fruits, Vegetables & Herbs Conference, KSMS, 25-27<sup>th</sup> September 2019
- 10. Jane Ambuko: Smallholder Aggregation and Processing Centers for Horticultural Farmers:
  Challenges and Opportunities for Scaling Up. Presented at the Yieldwise Partners Convening
  2019, at the AGRF Conference in Ghana September 4-7<sup>th</sup> 2019
- 11. Jane Ambuko: Strengthening Small Scale Processors to Reduce Postharvest Losses and Improve Profitability of Smallholder Horticulture. Presented at the Fruits, Vegetables and Herbs Conference at Kenya school of Monetary Studies, 25-27<sup>th</sup> September 2019
- 12. Jane Ambuko: Research experience Successes and challenges, presented at the OWSD Kenya National Chapter Workshop, 2019, 12th July, 2019, Icipe, Kasarani-Duduville Campus, Nairobi, Kenya
- **13. Jane Ambuko.** Innovations and Technologies in Food Storage & Postharvest Quality Preservation. The 3<sup>rd</sup> Annual Agribusiness Investors Summit 2019, Strathmore University Business School, 28-29<sup>th</sup> March 2019.
- **14. Jane Ambuko**. 'Overview of Technologies and Innovations for Youth in Postharvest Management'. Presented at the 2018 Youth and Innovation Summit, WMI CAVS, Nairobi. 25-26<sup>th</sup> October 2018
- **15. Jane Ambuko**. 'Applicable Technologies to Reduce Postharvest Losses Contributing to Food Security'. Presented at Food Security Workshop, CAVS, Nairobi. 9-10<sup>th</sup> December 2018
- 16. Jane Ambuko. Postharvest Loss Reduction in Horticultural Food Value Chains: Applicable

- Solutions from Research. Presented at the Fruits, Vegetables & Herbs Conference and Exhibition.  $5^{th} 7^{th}$  September, 2018. Kenya School of Monetary Studies
- **17. Ambuko Jane**. 'Postharvest Loss Management: The Unexploited Front towards Attainment of Food Security'. Invited paper presented at the Africa Food Security Conference and Agri-Exhibition. 14-15 August 2013, Laico Regency Hotel, Nairobi
- **18. Ambuko Jane**. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). Special Session on Food Losses and Waste at the Horticultural Association of Kenya annual conference, KALRO-Kandara, 4-8<sup>th</sup> December, 2015
- 19. Ambuko Jane. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). The International Union of Food Science and Technology (IUFoST) symposium on Food Waste and Food Losses: Addressing the global challenges at the Dubai International Food Safety Conference, Dubai, UAE, 26 27 October 2015
- 20. Ambuko Jane. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). Faculty of Agriculture, University of Nairobi Special Seminar on Postharvest Technologies for Reduced Postharvest Losses, 30<sup>th</sup> June 2015
- **21. Ambuko Jane**. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). Food Processing & Packaging Exposyum in Nairobi, Kenya, 18 20 November 2014, FAO Consultation. KICC Nairobi, Kenya
- **22. Ambuko Jane**. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). African Food Security Conference, Laico Regency, Nairobi 9<sup>th</sup> to 11<sup>th</sup> September, 2014
- 23. Ambuko Jane. Food Losses and Waste in the Context of Sustainable Food Systems. Food and

Agriculture (FAO) Report by High Level Panel of Experts (HLPE). Regional Follow-up Workshop for Norman Borlaug Fellows – 11<sup>th</sup> to 15<sup>th</sup> August, 2014. Beshale Hotel, Addis Ababa, Ethiopia

- **24. Ambuko Jane**. Food Losses and Waste in the Context of Sustainable Food Systems. Food and Agriculture (FAO) Report by High Level Panel of Experts (HLPE). RUFORUM Biennial Conference, 21<sup>st</sup> to 25<sup>th</sup> July, 2014. VIP Grand Maputo Hotel, Maputo, Mozambique
- 25. Ambuko Jane. PEER Participants' Conference 2014. Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania August 4-7, 2014. Winner (Crowd Favorite) of Flashtalk Competition for PEER Grantees, Topic Low-Cost Cold Storage Solutions to Manage Postharvest Losses in Perishables
- **26.** The Conference of African Science Journalists. Invited Panelist at AWARD Luncheon Topic 'Significant Shift? The Crucial Role of Women Agricultural Scientists in Innovation and Food Security in a Global Market, October 13<sup>th</sup> to 15<sup>th</sup>, 2014). Eastland Hotel, Nairobi.
- **27.** Arim Ogolla, C.A. Onyango, W. Owino, **J.Ambuko**, M.Masaku and L. Wasilwa. 2010. Post-harvest and Transport Technology issues in East and Southern Africa. Kenya Position paper presented at a Regional Video Conference and Kenya Institute of Administration. June, 2010

## J. OTHER SCHOLARLY TECHNICAL REPORTS

- Food Quality Management in Supply Chains Linking Smallholder Farmers to the Home-Grown School Meals Programme. Prepared for the United Nation's Food and Agriculture Organization (FAO), September, 2022
- Horticulture Consultative Workshop Report (July 2022) Assessing on-the-ground
  challenges and opportunities for innovative ideas and technologies that constrain/contribute
  to practical and academic horticulture pursuits. Presented to the Horticulture Innovation
  Lab, University of California Davis, USA

- Data, social determinants, and better decision-making for health (December 2021). The report of the 3-D Commission, Boston University School of Public Health. https://3dcommission.health/report
- Lessons Learnt and Technical Insights, Charcoal Coolers And Brick Coolers In Kakuma (March 2021). A Feasibility report prepared for the World Food Program
- Reduction Of Food Loss and Waste, Edited by Joachim Von Braun Marcelo Sánchez
   Sorondo Roy Steiner, Proceedings of a Conference held at Casina Pio IV, Vatican City,
   November 11-12, 2019
- 6. Jane Ambuko (for FAO and African Development Bank). 'Food losses and Waste Reduction in Africa: Targeted Interventions and Investments for Sustainable Impact' Advocacy paper
- Vishweshwaraiah Prakash, Jane Ambuko, Walter Belik, Jikun Huang and Toine
   Timmermans (2014). Food Losses and Waste in the Context of Sustainable Food Systems.
   High Level Panel of Experts HLPE Report No. 8

## K. TEACHING/LEARNING MODULES IN INTERNATIONAL PROGRAMS

- Postharvest Loss Reduction: Kenya Case Study of Mango in Kenya in Lost Harvest and Wasted Food 2022, Wageningen University Research, WUR, October 2022
- Making Agriculture Work: A case Study of Mango Fruit in Kenya in Postharvest Food Loss Reduction - Towards Sustainable Food Systems, offered by Wageningen University Research, WUR, June 2022
- Postharvest Handling and Quality Management in Fruits and Vegetables A practical
   Module in Food Loss and Waste Reduction: Towards Sustainable Food Systems. Training course offered by University of Nairobi, February 2022
- Overview of Postharvest Losses in Value chains: understanding losses through supply chain analysis in Lost Harvest Wasted Food offered by Wageningen University Research (WUR), September 2021

Managing Quality in Fruit Crop Systems in Practical Aspects in Postharvest Loss
 Prevention & Waste Reduction Management offered by Volcani Institute, Israel, February
 2022

## L. EDITORSHIP

- Invited Editor, Special Collection 'Cold Chain Management in Smallholder Horticulture', for Frontiers in Horticulture, Postharvest Physiology, Management and Technology Section.
- Invited Co-editor, Special Issue on 'Innovative Solutions for Food Loss and Waste
   Reduction in Africa'. International Journal for Postharvest Technologies and Innovation,

   IJPTI. Inderscience Publishers. <a href="https://www.inderscience.com/jhome.php?jcode=ijpti">https://www.inderscience.com/jhome.php?jcode=ijpti</a>
- 3. Prof. Madara Ogot Editor-in-Chief Prof. Winnie Mitullah Prof. Kiruti Kanyinga Prof. Walter Jaoko Dr. Richard Ayah Prof. Peter Ngau Prof. George Rading Prof. Tabitha Kiriti-Nganga Prof. Patricia Kameri-Mbote Prof. Attiya Warris Prof. Dan Olago Prof. Timothy Waema Prof. Winston Akala, Dr. Jane Ambuko. KENYA POLICY BRIEFS Towards Realization of Vision 2030. Issue 1, Volume 1, January 2020
- 4. **Jane Ambuko** (and 18 others) Expert Reviewers 'FRUIT AND VEGETABLES Opportunities and challenges for small-scale sustainable farming' Published by FAO and CIRAD, 2021, Rome. <a href="https://doi.org/10.4060/cb4173en">https://doi.org/10.4060/cb4173en</a>
- Jane Ambuko, Linus Opara, Olaniyi Fawole, Tsige A.A, Willis Owino, Brighton Mvumi and Vijay Yadav (2019) Editors Peer Reviewed BOOK OF ABSTRACTS, 2nd All Africa Postharvest Congress and Exhibition.
- 6. George Chemining'wa, Jane Ambuko, Douglas Miano, Lydia Wamalwa, Maina Muiru, Onesmus Kitonyo, Cecelia Onyango, Charles Gachuiri, Joyce Maina, Dasel Mulwa, Lucy Njue, Oliver Wasonga, Oscar Koech, Evans Chimoita, Jonathan Nzuma. Editors, Peer-reviewed book of abstracts, Agro 2019 Conference

- 7. **Jane Ambuko** (2018). Editor, Proceedings of the High Level Ministerial Dialogue and Postharvest Losses Reduction and Agro-processing Flagship Launch.
- 8. **Jane Ambuko** (2017). Editor, Proceedings of 1<sup>st</sup> All Africa Postharvest Congress and Exhibition Book of Abstracts and Peer-reviewed Extended Abstracts.
- Jane Ambuko (2017). Editor, Peer-reviewed Extended Abstracts of the 1<sup>st</sup> All Africa Postharvest Congress and Exhibition.
- 10. Dionysious Kiambi, Jane Ambuko, Hanna Gentle, Teresa Borelli, Mary Abukutsa, Maurice Oyoo, Lusike Wasilwa, Celine Temote, Victor Wasike and Gulia Rota Nodari (2015). Ed. Book of Abstracts, 2<sup>nd</sup> International Conference on Biodiversity for Food and Nutrition: unlocking the potential of biodiversity for food and nutrition security.
- 11. Wesonga J.M., Imbuga M, Ambuko J. Simiyu A.N. and Marete F. 2012. Farmers' course on small scale greenhouse farming. A training manual developed under National Council of Science and Technology funded project titled 'Promotion of Greenhouse Farming for Food Security and Wealth Creation in Western Kenya'.

## M. EXHIBITIONS

- Innovative Processed Products from Mango Fruit and Waste Valorization: Promoting Innovation and Technology in Agriculture & Trade, Exhibited at the Nairobi International Trade Fair, Jamhuri Park, 26<sup>th</sup> September 26 to 2<sup>nd</sup> October, 2022
- Smallholder Aggregation and Processing Centers: Strategy for Postharvest Loss Reduction and Better Market Access fo Smallholder Horticultural Farmers, Exhibited at Regional Horticulture Consultative Workshop, Hermosa Hotel, Karen, 25-27th May, 2022
- Innovative Products from Mango Fruit Processing and Waste Valorization, Exhibited at Nairobi Innovation week 2022, 26-28 April 2022
- 4. From the Lab to Land Taking Research Outputs to the End Users; Exhibited at 3rd All Africa

## N. WEBINARS

Genetically Modified Organisms, GMOs Dialogue: Pathways to Food and Nutrition Security:
 The Role of Genetically Modified Organisms. November 3, 2022

**Role: Organizer and Moderator** 

- International Day of Awareness of Food Loss and Waste 2022, September 29, 2022
   Role: Organizer and Speaker 'Food Loss and Waste Reduction Initiatives: For the People.
   For the Planet'
- International Day of Awareness of Food Loss and Waste 2021, September 29, 2021
   Role: Organizer and Moderator
- International Day of Awareness of Food Loss and Waste 2020, September 29, 2020
   Role: Organizer and Speaker 'Technologies and Training/Capacity Building Initiatives in Food Loss and Waste Reduction'
- Consortium for Innovation in Postharvest Loss and Food Waste Reduction Webinar, March 3,
   Role: Speaker 'Technologies & Innovations for Food Loss and Waste Reduction in
   Smallholder Zero-Loss Centers: Mango Case Study'.
- 6. Food Systems Summit 2021 Dialogues, Food Loss Dialogue Organized/Hosted by the Australian Centre for International Agricultural Research and the International Development Research Centre, Canada. June 3, 2021. Role: Invited Speaker

Role: Invited Speaker – 'How Can We Bring Technologies Closer to Smallholder Farmers?

- London School of Economics and Political Science, the Firoz Lalji Centre for Africa, Webinar,
   June 1, 2021. Role: Invited Speaker 'Managing Food Distribution Bottlenecks to Improve
   Access to Food During Emergencies
- 8. ADMI Institute of Prevention of Postharvest Loss Webinar, June 8, 2021.

**Role: Invited Speaker** – 'Managing Upstream Postharvest Food Loss – Lessons from Farm Level Zero-Loss Centers in Kenya'

- **9. Jane Ambuko**. 'Postharvest Food Loss and Waste during the COVID-19 Pandemic', presented at the UON-FAO Webinar, April 30, 2020 **Role: Speaker**
- 10. Jane Ambuko. Proper Cold Chain Management: Critical for Postharvest Loss Reduction in Horticultural Value Chains. Presented at the SOCAA Webinar, 14<sup>th</sup> August 2020 Role: Speaker
- 11. World Food Prize, Food Systems Dialogue focus of Postharvest Management. Webinar organized by the Consortium for Innovation in Postharvest Loss and Food Waste Reduction, October 10, 2020.

Role: Invited Speaker - 'Role of Smallholder Aggregation Centers to Reduce FLW'

## O. MEDIA AND OUTTEACH

- I. SCHOLARLY ARTICLES IN MAINSTREAM AND AGRICULTURE SECTOR MAGAZINES
- Jane Ambuko. Squeezing better profits from smallholder mango farming. PAN AFRICAN AGRICULTURE, January - March 2022 Pages 48-19
- Jane Ambuko. Postharvest Loss Reduction for Sustainable Food Systems. The Saturday Standard, Smart Harvest Segment – Pg 3
- 3. **Jane Ambuko**, Mehrdad Ehsani and Peiman Milani. A-Z of eating nutritious diet during coronavirus pandemic. SATURDAY NATION | Saturday, May 16, 2020
- 4. **Jane L. Ambuko**. Tackling postharvest losses in mango among resourcepoor farmers in Kenya. ISHS *Chronica Horticulturae* Volume 60:2 (Pages 28-29), September 2020
- 5. **Jane Ambuko:** High avocado fruit quality is key to competitiveness in the market place. HortiNews, August-September, 2019 Issue, Page 37-38
- Jane Ambuko: 'Exploiting The Value Of Mango Fruit During The Peak Season' HortiNews,
   June-July, 2019 Issue, Page 21-24
- **7. Jane Ambuko**; 'To put more money in mango farmers' pockets, we must fully embrace value addition'. Seeds of Gold January 26, 2019

- 8. Jane Ambuko. Need for a Paradigm Shift in Efforts to Address Food Insecurity in Africa Reduce Postharvest Food Losses. International Affairs Forum (IAF), Food and Water Security, June 2019 Issue, Pg 31 34
- Jane Ambuko. Simple techniques to keep your fruits and veges fresh. Seeds of Gold, June 16, 2018.
- **10. Jane Ambuko**. Simple Practices and Technologies for Cool/Cold Chain Management in Fresh Fruit and Vegetables. HortNews June-July 2018
- 11. Featured scientists 'Meet Women who Shape Agricultural Research, Policy'. The Standard on Saturday SmartFresh Section, 1st December, 2018
- 12. Featured interview: 'Six ways to keep your fruits, tubers and vegetables fresh' by Brian Okinda, Seeds of Gold Magazine, Saturday Nation, Pg 23
- 13. **Jane Ambuko.** Smallholder aggregation and agro-processing for better market access and profitability while reducing postharvest losses in horticultural value chains. Published in HortNews April-May 2018 Issue, Pg 40-42
- 14. Jane Ambuko. Easy way to put money in mango farmers' pockets. Published in Saturday
  Nation Seeds of Gold, March 24, 2018
- 15. Jane Ambuko. 'Keep in control maize losses this rainy season' Published in Saturday Nation
   Seeds of Gold, November 11, 2017. Link <a href="http://ow.ly/EkQS30gLUhB">http://ow.ly/EkQS30gLUhB</a>
- 16. **Jane Ambuko:** Why reducing postharvest losses is a priority for Africa. Published in The Conversation. November 20, 2017. Link <a href="https://theconversation.com/why-reducing-post-harvest-losses-is-a-priority-for-africa-87312">https://theconversation.com/why-reducing-post-harvest-losses-is-a-priority-for-africa-87312</a>
- 17. **Jane Ambuko**. 'Postharvest Losses: The plight of smallholder mango farmers in Kenya during peak season'. HortFresh Journal, March-April, 2016, Pp 34-35
- 18. Jane Ambuko. 'Why Groups can free mango farmers from the jaws of brokers'. Seeds of Gold Pp 28, Saturday Nation, March 12, 2016
- 19. Jane Ambuko. 'Postharvest Losses in Tomato'. Hortinews, September/October 2015, Pp 53,

- Jane Ambuko. 'Harvest factors that contribute to postharvest losses in fruits and vegetables'.
   Hortinews, February/March 2016, Pp 38
- 21. **Jane Ambuko.** 'Handling fruits and vegetables during el Nino'. Hortinews, November/December, 2015Pp 43-44,
- 22. **Jane Ambuko**. 'Postharvest Losses: The plight of smallholder mango farmers in Kenya during peak season'. HortFresh Journal, March-April, 2016, Pp 34-35
- 23. 'Kenya urged to adopt technologies to curb postharvest losses' a news article on the Coastweek.com following interview at the African Food Security Conference and Agribusiness Exhibition at Laico Regency Hotel. Available at <a href="http://www.coastweek.com/3633\_agriculture.html">http://www.coastweek.com/3633\_agriculture.html</a>
- 24. 'Extension Services: A Government's best support for its farmers'. Featured article on JKUAT Home Page on November 19, 2010 by the editor – following invited lead paper presentation at the Fifth JKUAT Annual Scientific, Technology and Industrialization Conference.
- 25. The Standard Newspaper article (March 14, 2015) under the SmartHarvest segment Focus on Innovation section (Page 20) titled 'Don's cheap freezer that keeps produce farm fresh'. The Standard Newspaper article, Innovator Section (page 14) on October 29 2014 'Low cost device helps farmer reduce waste'. Also featured in AWARD News. Also available online <a href="http://www.standardmedia.co.ke/article/2000139795/low-cost-device-helps-kenyan-farmers-reduce-waste">http://www.standardmedia.co.ke/article/2000139795/low-cost-device-helps-kenyan-farmers-reduce-waste</a>

### II. TELEVISION

 CNN International – Market Place Africa, How Cold Chain is Strengthening Informal Produce Markets in Kenya <a href="https://www.cnn.com/videos/business/2021/03/18/marketplace-africa-kenya-informal-produce-sector-cold-chain-spc.cnn">https://www.cnn.com/videos/business/2021/03/18/marketplace-africa-kenya-informal-produce-sector-cold-chain-spc.cnn</a> 13th March 2021

- KTN Morning Show: Investing in Women, 12<sup>th</sup> May 2022
   <a href="https://www.youtube.com/watch?v=4ykw90ppbwU&ab\_channel=KTNNewsKenya">https://www.youtube.com/watch?v=4ykw90ppbwU&ab\_channel=KTNNewsKenya</a>
- SMART FARM CITIZEN TV Man– Mango Value Addition (2020)
   <a href="https://youtu.be/q8V9ThizXsY">https://youtu.be/q8V9ThizXsY</a>
- 4. SHAMBA SHAPE-UP Post-Harvest losses, Cattle production, Electric Pressure Cooker, Series 10 Episode 24, <a href="https://shambashapeup.com/series/season-10/ep-24-post-harvest-losses-cattle-production-electric-pressure-cooker/">https://shambashapeup.com/series/season-10/ep-24-post-harvest-losses-cattle-production-electric-pressure-cooker/</a>
- Panelist on British Broadcasting Corporation (BBC), the Inquiry 'How Can We Feed 11
  Billion People', Broadcasted on 29<sup>th</sup> April, 2019, Available on the link
  <a href="https://www.bbc.co.uk/programmes/w3csytfv">https://www.bbc.co.uk/programmes/w3csytfv</a>
- 6. Agricultural Training in Kenya Promoting Agriculture among the youth. News clip under the Food Friday Segment of NTV Primetime News (15<sup>th</sup> August, 2013)

### III. BLOGS

- Jane Ambuko: 'Lab to Land: Innovative cold storage technologies for smallholder horticultural farmers. Rootooba <a href="https://www.rootooba.com/lab-to-land-innovative-cold-storage-technologies-for-smallholder-horticultural-farmers/">https://www.rootooba.com/lab-to-land-innovative-cold-storage-technologies-for-smallholder-horticultural-farmers/</a> 24<sup>th</sup> December 2020
- Jane Lukhachi Ambuko, Margaret Jesang Hutchinson and Komla Prosper Bissi, Emergence
  of the All Africa Postharvest Congress and Exhibition: Creating Awareness about Food Loss
  & Waste and Sustainable Solutions 29<sup>th</sup> September 2020,
  <a href="https://uonresearch.org/blog/emergence-of-the-all-africa-postharvest-congress-and-exhibition-creating-awareness-about-food-loss-and-waste-and-sustainable-solutions/">https://uonresearch.org/blog/emergence-of-the-all-africa-postharvest-congress-and-exhibition-creating-awareness-about-food-loss-and-waste-and-sustainable-solutions/</a>
- 3. Dirk E. Maier, Jane Lukhachi Ambuko, Jesus Orozco and Joseph O. Akowuah. 'Food Loss and Waste Reduction Why it matters for Food and Nutrition Security in Sustainable Food Systems'. 29the September, 2022
  <a href="https://sites.google.com/iastate.edu/phlfwreduction/home/blog/united-nations-international-day-of-awareness-of-food-loss-and-waste?authuser=0">https://sites.google.com/iastate.edu/phlfwreduction/home/blog/united-nations-international-day-of-awareness-of-food-loss-and-waste?authuser=0</a>

- 4. Jane Ambuko Eating Healthy to Boost Our Immunity and Protect Our Bodies from Disease-Causing Infections Including COVID-19. April 15, 2020. Research, Innovation and Enterprise Blog, University of Nairobi, <a href="https://uonresearch.org/blog/">https://uonresearch.org/blog/</a>
- 'Ice-Cold Innovation to Reduce Postharvest Losses' Featured article in the Feed the
   Future Newsletter March 27, 2014. Available online at <a href="http://feedthefuture.gov/article/ice-cold-innovation-reduce-postharvest-losses">http://feedthefuture.gov/article/ice-cold-innovation-reduce-postharvest-losses</a>
- 6. 'Kenya's Crop of Innovators Moving the Needle on Food Security' featured article on Grand Challenges for Development: Frontline Newsletter –July/August 2014 Edition. Available online <a href="http://www.usaid.gov/news-information/frontlines/grand-challenges/kenyas-crop-innovators-moving-needle-food-security">http://www.usaid.gov/news-information/frontlines/grand-challenges/kenyas-crop-innovators-moving-needle-food-security</a>

#### IV. YOUTUBE

- Postharvest Losses in Mango: Causes, Extent and Solutions. Mango Documentary Produced in Collaboration with Wageningen University Research, WUR, September 2022 <a href="https://youtu.be/Zk">https://youtu.be/Zk</a> 624eEwVA
- Post Harvest Management: From Lab to Land, Featured Video, The DrumBeat: Africa Bioscience Trends, ISSUE NO.14. https://africenter.isaaa.org/drumbeat/issue-14/ https://www.youtube.com/watch?v=D0u9NBLC60c&feature=youtu.be
- Small-scale processing of fruits and vegetables- <a href="https://www.youtube.com/watch?v=WTCcxEwAuR0">https://www.youtube.com/watch?v=WTCcxEwAuR0</a>
- 4. Small-scale processing of Mango chips <a href="https://youtu.be/72KgAnQPsHs">https://youtu.be/72KgAnQPsHs</a>
- 5. Small-scale processing of Mango leathers (Rolls) https://youtu.be/4fPA7p7omKI
- 6. Small-scale processing of tomatoes <a href="https://youtu.be/QVfkzpXIceE">https://youtu.be/QVfkzpXIceE</a>
- 7. Small-scale processing of Kales https://youtu.be/I0dZz3yGYKc
- 8. Cold Storage Technologies and Practices- <a href="https://www.youtube.com/watch?v=ZO7jc5O8vrk">https://www.youtube.com/watch?v=ZO7jc5O8vrk</a>

#### V. OUTREACH BROCHURE ON POSTHARVEST

Harvesting and Storage of Cereals, Pulses and Fresh Produce – Produce by Shamba-Shape
 Up with Input on Fresh Produce.

## P. STUDENT SUPERVISION: STUDENTS SUPERVISED TO COMPLETION

### I. PHD STUDENTS

- 1. Joseph K. Njuguna (PhD Horticulture, University of Nairobi). Effect of Growth Regulators and Fertilization on Mango Flowering, Yield and Fruit Quality (Graduated, 2017)
- Elias K. Mibei (PhD, Food Science and Technology, JKUAT). Application of Metabolomics in Assessment of Functional Diversity and Quality Traits of Selected African Eggplant and Tomato Accessions (Graduated, 2018)
- Grace W. Mungai. (PhD Plant Biotechnology, JKUAT). Whole-Genome Sequencing and Analysis of the African Eggplant (Solanum aethiopicum) and Tomato (Solanum lycopersicum).
   Graduated in December 2019
- 4. Penina Mueni Yumbya (PhD Horticulture, University of Nairobi). Efficacy of Hexanal & Its Mode of Action on the Postharvest Quality of Banana Fruits. Graduated December, 2020
- 5. Bitange Naphis Mokaya, PhD Agronomy, University of Nairobi. Effect of Calcium Nutrition on Yield, Jelly Seed and Postharvest Quality of Mango Fruits. Graduated in September 2022
- 6. Mujuka Esther Achieng' Esther, PhD in Agricultural Economics, University of Nairobi.
  Potential Economic Impact and Willingness to Pay for Postharvest Technologies and Their
  Value-Added Products among Mango Producers and Consumers in Kenya. Letter of Award –
  pending graduation in September, 2023

#### II. MSC STUDENTS

 Amwoka Emmanuel Muhuyi (MSc Horticulture, University of Nairobi). Effectiveness Of Selected Postharvest Handling Practices and Technologies to Preserve the Postharvest Quality of Mango Fruit. (Graduated, 2021)

- Enock Mosenda (Msc Agronomy, University of Nairobi). Agronomic traits assessment and effect
  of water stress on growth, yield and nutritional quality of spider plant (*Cleome gynandra L*.)
  (Graduated, 2020)
- 3. Antony Bundi Mwirigi (Msc Agricultural and Applied Economics, University of Nairobi).

  Analysis of Adoption of Preharvest Practices and their Impact on Mango Postharvest Losses. A case of mango farmers in Embu and Machakos County. (Graduated, 2020)
- 4. Isaac Nyangena (Msc Food Science and Technology, JKUAT). Effects Of Drying Pre-treatments
  On The Antioxidant Properties And Shelf Life-stability Of Mango Fruits (Graduated, 2020)
- Martin Maina (Msc Agronomy, University of Nairobi). Effects Of Water And Nitrogen Nutrition
   Stress On Growth, Yield And Quality Of Selected African Tomato (Solanum Lycopersicum)
   Accessions And Commercial Varieties (2020)
- Naomi Nammaiyan Mbondo. (Msc Food Science and Technology, JKUAT). Optimization of Drying Processes for Nutrient and Quality Retention in African Eggplant. Msc Food Science and Technology (Graduated 2020)
- Benson Maina (Msc Horticulture, University of Nairobi). Efficacy Of Waxing Innovations To
  Extend Shelf Life And Preserve Postharvest Quality Of Mango Fruit. Graduated in December
  2019
- 8. Mary W. Gateri (Msc Horticulture, University of Nairobi). Effect of Nitrogen Fertilization and Time Of Application On Bulbing and Storage Of Onion (Allium Cepa L.). Msc Thesis submitted for Examination. *Graduated in December 2019*
- Fred Manyonzo (Msc Horticulture, University of Nairobi). Evaluating The Effectiveness Of Evaporative Cooling Technologies In Preserving Postharvest Quality Of Tomato Under Different Agro-Ecological Zones Of Malawi. Graduated in December 2019
- **10.** Sam Koille (Msc Agronomy, University of Nairobi). Optimization of Nutrient and Cultural Practices to Increase Leaf Yield of Indigenous Vegetables. (Graduated 2018)

- **11.** Robert John Ouko (Msc Horticulture, University of Nairobi). Effects Of Hexanal Formulations on The Postharvest Life and Quality Of Papaya Fruit. (Graduated, 2018)
- **12.** Chemtai Caroline (Msc Agronomy, University of Nairobi). Effect of fertilizers, harvesting methods and water stress on growth, yield and nutritional quality of leafy Amaranthus spp and Solanum spp. (completed and defended, Graduated 2018)
- **13.** Loreto Atieno Oduor (Msc Food Science and Technology, JKUAT). Improvement Of The Storability And Postharvest Quality Of Cassava Using Surface Coatings (Graduated, 2018)
- 14. Stanley Kirakou (Msc Horticulture, University of Nairobi). Evaluation Of The Quality Attributes Of Selected Local Cowpea Accessions And Their Response To Postharvest Treatments. (Graduated, 2017)
- 15. Francis Kangethe Muniu (Msc Horticulture, University of Nairobi). Collection, Characterization And Evaluation Of Vegetable Cowpea Accessions And Response Of Selected Accessions To Organic And Inorganic Nitrogen Fertilizers In Coastal Kenya. (Graduated, 2017
- 16. Ann K. Munene (Msc Plant Breeding and Biotechnology, University of Nairobi). Genetic Characterization and Nutritional Analysis of Eastern and South African Cleome gynandra (Spider Plant) accessions. (Graduated, 2017)
- 17. Karithi Esther M (MSc Horticulture, University of Nairobi). Evaluation of the Efficacy of Low Cost Cold Storage Technologies to Extend Shelf Life of Selected Horticultural Commodities. (Graduated, 2016)
- 18. Jacinta Wairimu Muiruri. (MSc Horticulture, University of Nairobi). Evaluation Of Maturity Indices For Selected Mango Varieties And The Effect Of Harvest Maturity On Quality Attributes. (Graduated, 2016)
- 19. Oduor Kenneth Tembe (Msc Agronomy, University of Nairobi). Morphological, Agronomic and Biochemical Characterization Of African Wild Tomato (Lycopersicon Spp). (Graduated, 2016)

- 20. Lagat Samson Kipchirchir (Msc Agronomy, University of Nairobi). Phenotypic Characterization of African Eggplant (Solanum Aethiopicum L. And Solanum Anguivi L.) Accessions and Their Adaptation To Water Stress. (Graduated, 2016)
- 21. Stephen Maloba Etabale (MSc Horticulture). A study on effective concentration and timing of off-season flower induction technologies (Potassium Nitrate and Ethephon) in mango fruits.
  (Graduated, 2016)
- 22. Elizabeth Wangechi Gathogo (Msc Agricultural Resource Management, University of Nairobi).
  Growth and Yield Performance Of Cabbage Varieties Under Different Fertilizer Regimes In
  Manyatta Sub County, Embu County. (Graduated, 2016)
- 23. Naphis M. Bitange (M.Sc. Agronomy, University of Nairobi). Effect of varying rates of organic and inorganic fertilizers on growth, yield and nutrient use efficiency of clonal tea (Camellia sinensis L. [O] Kuntze. (Graduated, 2016)
- 24. Kubai R. Mwendwa (Msc Food Science and Technology, JKUAT). Nutritional and Postharvest Characteristics of Commercially Grown Tomatoes For The Local Market In Kenya. (Graduated, 2016)
- 25. Lilian Atieno Ouma (Msc Horticulture, University of Nairobi). A Comparative Evaluation of Maturity Indices and Quality Attributes of Mango Fruits Produced under Different Agroecological Conditions in Kenya and their Response to Postharvest Treatments. (Graduated, 2015)
- 26. Daniel Wasonga. (Msc Agronomy, University of Nairobi). A comparative Evaluation of Eastern and Southern African spider plant (Cleome gynandra) Species for Nutritional and Health Promoting Bioactive Compounds. (Graduated, 2015)
- 27. Baroness Nyagechanga Omwenga. (Msc Agronomy, University of Nairobi). Effect of Integrated Nutrient Management and Moisture Conservation Practices on Growth, Yield and Quality Of Snap Bean (Phaseolus Vulgaris L.) in Central Kenya. (Graduated, 2015)

- 28. Oliver Nyongesa Wekesa (Msc Agronomy, University of Nairobi). Screening and Testing Finger Millet Varieties for Drought Adaptability and Nutritional Factors in Eastern Kenya. (Graduated, 2015)
- 29. Nancy Kemunto (Msc Horticulture, University of Nairobi). Effects of Agro-Ecological Conditions on the Post-Harvest Quality and Shelf Life of Apple Mango Fruits and their Response to 1-Methylcyclopropene (1-MCP). Graduated in 2014
- 30. Peninah Mueni Yumbya. (Msc Horticulture, University of Nairobi). Packaging on Postharvest Shelf Life and Quality of Purple Passion Fruits (Passiflora Edulis Sims. Graduated in 2013
- 31. Ruth Wanjiku Githiga (Msc Horticulture, University of Nairobi). Effect of 1-Methylcyclopropene and Activebag® Packaging on the Postharvest Characteristics of Mango Fruits. Master of Science, Horticulture, University of Nairobi, graduated in 2012.
- 32. Kamanu, J. Kariuki (Msc Horticulture, University of Nairobi). Effect of Inorganic Nitrogen Application Regimes and *Rhizobium* Inoculation on Growth, Yield and Quality of Snap Bean Varieties in Central Kenya. Msc, Agricultural Resource Management, University of Nairobi. Graduated in 2011
- 33. Peter Muchiri Daniel (Msc Horticulture, University of Nairobi). Effects of Rates and Sequence of Application of Gibberellic Acid and Benzyladenine on Potato Tuber Sprouting, Yield and Use of True Potato Seed Alternative for Propagation. Master of Science, Horticulture, University of Nairobi, graduated in 2010.

## Q. ON-GOING GRADUATE STUDENT SUPERVISION

## I. PHD STUDENTS

- Erneste Murindwa, PhD Food Science and Technology, University of Nairobi. Farmers' knowledge and practices of the standard postharvest handling of avocados in Rwanda and the impact of training, physico-chemical and antimicrobial treatments to increase marketability
- 2. Finyange Pole, PhD in Agronomy, Kenyatta University. Evaluation of Inorganic and Organic Fertilizers on Productivity and Quality of Bixa Orellana in Kwale County, Kenya

3. Emmanuel Amwoka, PhD Horticulture, University of Nairobi. Postharvest Loss Management in African Leafy Vegetables.

### II. MSC STUDENTS

- Justa Kathambi, MSc Horticulture. Effectiveness Of Coolbot<sup>tm</sup> Technology To Preserve Quality
   And Extend Shelf Life Of Collards And Tomato Under Different Agro-Ecological Conditions
- Karen Wambui, MSc Horticulture. The Effect of Nitrogen Fertilization and Harvest Stage on Post-Harvest Quality of Fresh and Dried Black Night Shades and Kales
- Suleiman Mutuli, MSc Horticulture. Effect of Nitrogen Nutrition on Yield, Postharvest Shelflife and Quality of Solar Dried Tomatoes
- 4. Alex Mumo Muinde, MSc Horticulture. Effectiveness Of 1- Methylcyclopropene (1-MCP) On Vase Life and Sensitivity Of Ethylene On Tiger Lily And Oriental Casablanca Lilies
- Githumbi Rose Njeri, MSc Agricultural Economics. Assessment of Drivers of Postharvest
   Losses and Factors Influencing Adoption Of Loss Reduction Practices Along The Mango Value
   Chain In Embu And Machakos Counties, Kenya
- 6. Alice Gathoni Nyoro, MSc Agronomy, Evaluation of the Integrated Use of Vermicompost and Inorganic NPK Fertilizer on Growth, Yield and Quality of Strawberry (*Fragaria Ananassa*)
- 7. Naum Jepkurui, Msc Animal Nutrition. Effects Of Inclusion Of Mango Seed Kernel On The Growth Performance, Meat Quality And Carcass Characteristics Of Broiler Chicken
- 8. Everlyne Nawiri, Msc Nutrition. Effect Of Mango Processing Byproducts On Performance Of Layer Chicken And Egg Quality
- Edwin Ademba, MSc Horticulture, University of Nairobi. Effect Of 1-Methylcyclopropene
   Treatments On Ripening Profile Of The Hass Avocado Fruit Under Different Storage
   Conditions
- 10. Geoffrey Chomba, MSc Horticulture, Effectiveness Of 1-Mcp On The Ripening Profile And Postharvest Quality Of Tommy Atkins And Kent Mango Fruits

- 11. Mwarome Jumbale, MSc Food Science and Technology, Optimization of processing parameters in the production of mango flakes
- 12. Mbusa Shikwaya, MSc Food Science and Technoly, Development of Micronutrient Enriched Mango-Moringa Nectar From Kenyan Apple And Tommy Atkin Mango Variety
- 13. Oliver Otieno Opondo, Msc Agronomy, University of Nairobi. Effects Of Nitrogen Fertilizer And Topping Height On Growth, Yield And Quality Of Flue Cured Virginia (Fcv) Tobacco
- 14. Collins Kipkemoi, MSc Environmental & Biosystems Engineering, Optimization of An Evaporative Charcoal Cooling System by use of Computational Fluid Dynamics (CFD
- 15. Tefania Nikuze, MSc Plant Health Science and Management, JKUAT. Identification of Microsatellite Markers Linked to Bacterial Wilt Resistance in African Eggplant Accessions
- 16. Sharon Inzaule, MSc Horticulture. Efficacy Of Sanitizing Agents In Reducing Postharvest Rotting In Tomatoes Packaged In Modified Atmosphere At Different Storage Conditions
- 17. Jane Ilamwenya Masambia, Msc Agronomy. Effects Of Organic And Inorganic Fertilizers On Growth Yield And Nutritional Quality Of Slenderleaf (*Crotalaria* Species)
- 18. Fodrick Mourice, MSc Horticulture. Effectiveness of Hot Water Treatment to Disinfest Fruit Flies in Mango Fruits

## R. EXTERNAL THESIS EXAMINERSHIP

- External Examiner, Department of Seed Crop and Horticultural Sciences, School of Agriculture and Biotechnology, University of Eldoret – 2019 to 2023
- External Examiner University of Namibia, Faculty of Agriculture, Engineering and Natural Sciences - 2022
- External Thesis Examiner School of Agriculture and Entrepreneurship, Kenyatta
   University 2020
- External Thesis Examiner Department of Horticulture, Jomo Kenyatta University of Agriculture and Technology – 2020 to current

- 5. External Thesis Examiner Faculty of Science, Tshwane University of Technology (2021)
- External Thesis Examiner Postharvest Technology, Food Science Department,
   Stellenbosch University 2020
- External Thesis Examiner University of Johannesburg, Department of Botany and Plant Biotechnology - 2023

# S. RESEARCH AND DEVELOPMENT PROJECTS

ON-GOING PROJECTS			
#	PROJECT TITLE	FUNDED AMOUNT	FUNDING ORGANIZATION & YEAR
2.	Enhancing Productivity, Post-harvest Management and Market Access of African Indigenous Vegetables in Kenya PI Institution - KALRO Role: Co-Principal Investigator  Technical support for	USD 750,000 (Total Project Budget)  UON Budget USD 250,000 = KES 35,000,000  KES 10,293,400	USAID – Feed the Future Innovation Lab for Horticulture 2023 - 2026  United Nations Food and
	implementation of the Post-Harvest Management strategy for food loss and waste reduction through building technical capacity, developing monitoring frameworks and conducting advocacy of PHM strategy  Role: Principal investigator	1138 10, <b>2</b> 96,100	Agriculture Organization (FOA) 2023 – 2024
3.	Ecofriendly Cold Storage Solutions Role: Principal Investigator	KES 3,124,400	World Food Program – 2021 to 2023
4.	The Food Systems Research Network for Africa Role: Institutional Champion, UON	,	UK Research Innovation (GCRF) 2019 – 2023
5.	Capacity Building in Food	GBP 65,000	UK Research Innovation

6.	security for Africa – CaBFoodS-Africa Role: Principal Investigator (UON)  Adaptation and upscaling of tested and applicable postharvest technologies for smallholder horticultural farmers to reduce postharvest losses. Role: Principal Investigator	(KES 10,000,000)  KES 12,000,000	(GCRF) 2019 – 2022  National Research Fund, 2017-2023
7.	Consortium for Innovation in Post-Harvest Loss and Food Waste Reduction – Innovation Platform to Gain Sustainable Efficiencies in the Global Food System  Role: Principal Investigator (UON)	·	Foundation for Food and Agriculture Research (FFAR), 2019 – 2023
8.	Application of 1-MCP in mango and avocado – Service Agreement Role: Research Consultant	KES 1,500,000	AgroFresh Ltd (2021 to 2023)
9. SUB-TOT	All Africa Postharvest Congress and Exhibition Collection Vote Resource mobilization vote for AAPHCE  TAL ONGOING PROJECTS	USD 450,000 (KES 50,000,000)	Various Funding Organizations
COMPLETED PROJECTS			
1.	SolCOOL' - Solar Powered Cold Food Chains for Food Waste Reduction and Value Addition Role: Principal Investigator (UON)	GBP 48,000 (KES 8,000,000)	Innovate UK (UK Research and Innovation) 2019 – 2021

2.	Quality Management and Food Waste in Homegrown School Meals Program Role: Principal Investigator (UON)	KES 4,047,240	United Nations, Food and Agriculture Organization (FAO), 2020-2022
3.	Strengthening Kenyan Small Scale Processors to Access Market and Reduce Losses. Role: Principal Investigator	USD 162,000 KES 18,000,000	Rockefeller Foundation, 2018-2022
4.	University of Nairobi Postharvest Project: Establishment of Aggregation Centers for Smallholder Horticultural Farmers and Organization of the 1st and 2nd All Africa Postharvest Congress and Exhibition. Role: Principal Investigator	USD 504,000 KES 51,000,000	Rockefeller Foundation, 2016-2019
5.	Evaporative Cooling Technologies for Vegetable Preservation in the Kenya Role: Principal Investigator	USD 35,000 KES 4,000,000	D-Lab Massachusetts Institute of Technology
6.	Evaluation of Post-harvest treatments on 'Apple' Mango. Role: Research Consultant	KES 500,000	Safe Pack Products Ltd, 2017-2018
7.	Enhanced preservation of fruits using nanotechnology.) (2014-2018): Role: Co-Investigator	USD 300,000 (KES 30,000,000)	International Development Research Centre (IDRC), 2015-2018
8.	Innovative Cooling Option for Smallholder Farmers Role: Principal Investigator	USD 90,000 KES 10,000,000	USAID under the Kenya Feed the Future Innovation Engine (KFIE), 2013-2015
9.	University of Nairobi Postharvest Research for Vegetable Crops. Role: Principal Investigator	USD 20,000 KES 2,000,000	USAID through World Vegetable Center (formerly AVRDC), 2013-2015
10.	Harnessing Genomics of Edible	USD 60,000	Partnerships for Enhanced

	African Solanaceae Plants for Improved Nutritional and Food Security. Partnerships for Enhanced Engagement in Research (PEER) Science funded by USAID-NSF (2013-2016).  Role: Co-Investigator	KES 6,000,000	Engagement in Research (PEER) Science funded by USAID-NSF, 2013-2016
11.	Genetic Characterization of Eastern and Southern African Cleome gynandra (Spider Plant) species for nutritional and health promoting bioactive compounds. Role: Principal Investigator	KES 1,400,000	National Commission for Science and Technology (NACOSTI), 2013-2015
12.	Improving profitability of the mango value chain through strategies for off-season flower induction, proper harvest scheduling and appropriate postharvest handling practices and technologies.  Role: Principal Investigator	USD 60,000 KES 6,000,000	Regional Universities Forum (RUFORUM), 2012-2014
13.	Improving incomes for smallholder farmers and other value chain actors through enhanced productivity, post-harvest handling technologies, value addition and marketing of mango and passion fruit products.  Role: UON PI	KES 4,000,000	Kenya Government through the Kenya Agricultural Productivity and Agribusiness Project (KAPAP), 2012-2015
14.	Screening Finger Millet Varieties for Adaptability to Drought Prone Ecological Regions of Eastern Kenya as a Strategy to Combat Food Insecurity and Climate Change.  Role: Co-Investigator	USD 60,000 KES 6,000,000	Regional Universities Forum (RUFORUM), 2011-2013
15.	Validation of snap bean	KES 20,000,000	Association for Strengthening

16.	integrated crop management technologies for improved livelihoods.  Role: Co-Investigator  Enhancing the Postharvest Shelf	USD 12,000	Agricultural Research in East and Central Africa (ASARECA), 2011-2013  International Foundation for
10.	Life of Passion Fruits Grown under Different Agro-Ecological Conditions through Application of an Ethylene Inhibitor, 1-Methylcyclopropene.) – Role: Principal Investigator		Science ( <b>IFS</b> ) 2009 – 2012).
18.	'Application of Methylcyclopropene (1-MCP) to enhance the Postharvest Shelflife and Quality of Passion and Mango Fruits'. Role: Principal Investigator	KES 900,000	Kenya Government through National Council for Science and Technology (NCST) – (2008 to 2011).
19.	Minimizing Postharvest Losses among Mango Farmers through Training on Good Harvest and Postharvest Handling Practices. Role: Principal Investigator	KES 200,000	Trellis Fund Student Capacity Building Project supported by Horticulture CRSP and USAID (2013- 2014).
SUBTO PROJI	OTAL COMPLETED ECTS	173,247,240	
	ND TOTAL (COMPLETED ONGOING PROJECTS)	310,871,640	

# T. CONSULTANCY ASSIGNMENTS

- 1. FAO Consultant on Postharvest Loss Reduction Strategy for Kenya 2022
- 2. Technical support for IKEA Anchor Program Design, CLASP 2021 2022
- Reginal Technical Expert for International Centre for Evaluation and Development, ICED for Horticulture Innovation Lab, 2022

- Blended learning trajectory on Food Loss and Waste. Institute Wageningen Centre for Development Innovation, WUR, Netherlands. 2021
- National Post-Harvest Loss Reduction Consultant. Food and Agriculture Organization of the United Nations. April 2020
- Establishment of Evaporative Cooling Storage Facilities in Kalbi Market (Turkana County) for
  Fruit and Vegetables traders. Consultancy Assignment by World Food Program (WFP) through
  UON (2018- 2019)
- Consultancy Assignment on Targeted Interventions and Investments for Sustainable Impact.
   Assignment by Food and Agriculture Organization (FAO) and African Development Bank
   (2018)
- Consultancy Assignment Training of Technoserve Kenya Field Staff on 'Good Postharvest
  Handling Practices to Reduce Postharvest Losses in the Mango Supply Chain' (2016).
   Consultancy Assignment by Technoserve Kenya
- Jane Ambuko (2015). Consultancy Assignment on Training Smallholder Farmers on Postharvest Handling of Vegetables, in Five Counties in Kenya. World Vegetable Center (AVRDC) under USAID.
- 10. Irungu, P., J. Ambuko and William M. Muiru. Farmer Perception Study of *Aflatoxin*Control Using Biological Control –Aflasafe in Kenya, 2012. A consultancy Assignment by African Agricultural Technology Foundation (AATF), Nairobi, Keny
- 11. Hutchinson M.J, Nyikal, R and **Ambuko J**. (2010). 'Essential Services Package of Support to Women Farmers'. A consultancy report submitted to Action Aid Kenya (AAK), Nairobi, Kenya
- 12. Irungu, P. and **J. Ambuko** (2009). Trends in Agricultural Research and Development in Selected sub-Saharan African Countries (2000-2015). A consultancy report submitted to African Agricultural Technology Foundation (AATF), Nairobi, Kenya, 135p.

- 13. Kaitibie, S., P. Irungu and J. Ambuko (2009). Constraints to Agricultural Productivity and the Relevance of Chinese Agricultural Technology to Smallholder African Farmers in Ethiopia, Kenya, and Tanzania. A consultancy report submitted to African Agricultural Technology Foundation (AATF), Nairobi, Kenya, 111p.
- 14. Irungu, P. and J. Ambuko (2009). An inventory of agricultural technologies developed by CGIAR in Africa which are ready for deployment by African smallholder farmers. A consultancy report for the African Agricultural Technology Foundation, AATF, Nairobi, Kenya

## U. COMMUNITY OUTREACH/ STAKEHOLDER ENGAGEMENT INITIATIVES

## **I: Community Engagement Initiatives**

- Established evaporative cooling storage facilities for Jitahidi Women Group, Vihiga County
   (2022) Supported by NRF-Kenya
- Established Evaporative Cooling Technologies for traders at Kaloibei Market in Turkana County, (2019) Supported by the World Food Program
- Established Evaporative Cooling Technologies for traders at Wajir Town (2022) Supported by the World Food Program
- 4. Established Evaporative Cooling Technologies for traders at Marsabit Town (2022) Supported by the World Food Program
- Established the 1<sup>st</sup> Smallholder Horticultural Aggregation and Processing Center in Kenya for Karurumo Smallholder Farmers (2018) – Supported by YieldWise Initiative, Rockefeller Foundation
- Established a mango processing unit for the Association of Kenya Mango Traders (AKMT),
   2021 Supported by YieldWise Initiative, Rockefeller Foundation
- Established evaporative cooling storage facilities for smallholder traders in Ngoliba Market,
   Kiambu County (2019) Supported by NRF-Kenya

 Established an off-grid smallholder Aggregation Center established in Masii (Machakos County) – Masii Horticultural Cooperative (2018) - Supported by YieldWise Initiative, Rockefeller Foundation

## **II. Technical Working Groups**

- 1. National Task Team for the International Day of Awareness of Food Loss and Waste 2023
- National Technical Working Group on Postharvest Loss Reduction developed the National Strategy for Postharvest Loss Reduction
- Member of the Horticulture Fresh Produce Technical Committee of the Kenya Bureau of Standards (2016 to Date). Developed Market Standards for Various Horticultural Commodities (KS Market Standards for Fresh Fruits and Vegetables Published and Launched in 2017)
- 4. Member of the National Horticulture Technical Working Group
- 5. Mango Technical Working Group Developed a strategy for Eradication of the Fruit Fly

## III. Organization of National and International Conferences (Last 5 Years)

- Technical Chair and Co-convener, 4<sup>th</sup> All Africa Postharvest Congress and Exhibition
   (Hybrid Virtual and Physical at the African Union Headquarters, Addis Ababa, Ethiopia),
   19<sup>th</sup> to 22<sup>nd</sup> September 2023. Chair of the Technical Committee of the Congress
- Technical Chair and Co-convener, 3<sup>rd</sup> All Africa Postharvest Congress and Exhibition
   (Virtual) 13<sup>th</sup> to 16<sup>th</sup> September 2021. Chaired the Technical Committee of the Congress
- Technical Chair and Co-convener, 2<sup>nd</sup> All Africa Postharvest Congress and Exhibition held at the AU Headquarters in Addis Ababa,17-20<sup>th</sup> September 2019. Co-chaired the Technical Committee of the Congress
- Convener, 1<sup>st</sup> All Africa Postharvest Congress and Exhibition which brought together more than 600 delegates from 40 countries to share information, establish partnerships, show-case postharvest technologies and strategies

- Chair of Organizing Committee, Faculty of Agriculture Conference Agro 2019
   Conference
- Member of Scientific Committee Faculty of Agriculture Conference Agro 2023
   Conference
- Member of Scientific Committee, All Africa Horticultural Congress (AAHC), Hosted by the International Society of Horticultural Science (ISHS), March 2021, Senegal
- Member of organizing committee, Fruits and Vegetables Annual Conference (2017, 2018, 2019, 2022)
- Member of organizing committee, Horticultural Association of Kenya Annual Conferences (2009 to 2018)
- Member of organizing committee, Kenya National Academy of Sciences (KNAS), TWAS-SAREP Regional Young Scientists Conference, 23-25 October, 2019, Nairobi Club

## **IV. Capacity Building Initiatives**

I have conducted several trainings for smallholder horticultural farmers, processors and other value chain actors (local and international)

- Online Training of Agriculture Sector Experts on 'Making agriculture work for food and nutrition security', organized by Wageningen University and Research (WUR), October 2022
- Online Training of Agriculture Sector Experts on 'Lost Harvest' organized by Wageningen University and Research (WUR), October 2022
- Online Training of Agriculture Sector Experts. Making Agriculture Work: A case Study of Mango Fruit in Kenya in Postharvest Food Loss Reduction - Towards Sustainable Food Systems, offered by Wageningen University Research, WUR, June 2022
- Online training of Agriculture sector experts Overview of Postharvest Losses in Value chains: understanding losses through supply chain analysis in Lost Harvest Wasted Food offered by Wageningen University Research (WUR), September 2021

- Training on Managing Quality in Fruit Crop Systems part of a courses on Practical Aspects in Postharvest Loss Prevention & Waste Reduction Management offered by Volcani Institute, Israel, February 2022
- Training of Food Supply Chain Practitioners from 9 African Countries. Postharvest Food Loss and Waste Reduction: Towards Sustainable Food Systems, Capacity Building in Food Security (CaBFoodS-Africa) Project, 3<sup>rd</sup> to 5<sup>th</sup> May 2021
- Training of Food Supply Chain Practitioners from Different Institutions and Counties in Kenya.
   Postharvest Food Loss and Waste Reduction: Towards Sustainable Food Systems, Capacity
   Building in Food Security (CaBFoodS-Africa) Project, 1<sup>st</sup> to 3<sup>rd</sup> February 2022
- Training of young entrepreneurs on good processing practices and product development from mango fruits – February 2020
- Training of Masii Horticultural Farmers and processors on good processing practices and product development from mango fruits – February 2020
- Training of Karurumo Self-help Horticultural Farmers on good processing practices and product development from mango fruits – March 2020
- Training of Smallholder Horticultural Farmers in Masii, Machakos County (2018) supported by the Rockefeller Foundation
- Training of Smallholder Horticultural Farmers in Karurumo, Embu County (2018), supported by the Rockefeller Foundation
- Training of Technoserve Service Providers in the Mango Value Chain, supported by Rockefeller Foundation under YieldWise Program (2016)
- Training of Smallholder Vegetable farmers in Kiambu, Juja, Homabay, Migori and Vihiga
   Counties under AVRDC (now World Vegetable Center) Postharvest Project (2016)
- Training of Smallholder mango farmers in Makueni under Trellis project sponsored by USAID
   (2014)

Training of Smallholder mango farmers in Makueni County under Coolbot project funded by
 USAID – Kenya Feed the Future Innovation Engine (KFIE) in 2015

## V: Selected Professional Engagements

- Launch of the Pamoja Initiative in partnership with Dehytray East Africa Limited aimed at scaling up and commercialization of the Dehytray Technology developed by Purdue University on 28<sup>th</sup> July 2023, at the Upper Kabete Campus
- Hosting of 60 USAID Innovation Lab Directors from around the world showcasing innovative solutions for food loss and waste management at the Cold Storage Demonstration Hub and Food Processing Hub, on 23<sup>rd</sup> May, 2023, Upper Kabete Campus
- Hosting of a high level delegation of 30 people from the Rockefeller Foundation Headquarters
   (New York and Regional Office) showcasing innovative solutions for food loss and waste
   management at the Cold Storage Demonstration Hub and Food Processing Hub, 28<sup>th</sup> June 2023,
   Upper Kabete Campus
- CLASP Stakeholders workshop on Agriculture Value Chains Development, Siaya County
- Ministerial Validation Meeting, On IGAD Post Harvest Loss Management (PHLM) Strategy,
   organized by IGAD, 12 August 2021
- Technical Validation of the IGAD Post Harvest Loss Reduction Strategy IGAD, FAO, 7th July
   2021
- EAC Regional Fruits and Vegetables Platform Meeting
- National Stakeholders Validation of Food Safety Coordination Bill, Movenpick Hotel, Nairobi,
   16th Feb 2022
- Invited Panelist, Inaugural NATION LEADERSHIP FORUM on 'Food Security and Water' Hosted by the Nation Media Group on 3<sup>rd</sup> April 2017
- Invited Panelist, Fruit and Vegetables Conference and Exhibition 2017. 13<sup>th</sup> to 14<sup>th</sup>
   September 2017, Kenya School of Monetary Studies, Nairobi, Kenya

- Invited Pitcher, Food loss and waste (FLW) reduction: the role of reliable data on FLW.
   AgriProFocus Network Day, Wednesday, 15<sup>th</sup> November 2017, Safari Park Hotel
- Invited speaker, High Level Ministerial Dialogue and Post-harvest Losses Reduction and Agro-processing Flagship, African Development Bank Convening, Abidjan, Cote d'Ivoire, 21-22<sup>nd</sup> November, 2017
- Chief rapporteur, High Level Ministerial Dialogue and Post-harvest Losses Reduction and Agro-processing Flagship, African Development Bank Convening, Abidjan, Cote d'Ivoire, 21-22<sup>nd</sup> November, 2017
- Invited panelist at the Kenya Innovation Engine (Feed the Future) Lessons Learned Event,
   21<sup>st</sup> September 2017 at the Tribe Hotel, Village Market
- Invited session moderator, Rockefeller Foundation YieldWise Convening Session on Understanding Post-Harvest Loss Measurement and its Metrics, February Tuesday 20<sup>th</sup> February, 2018, Tamarind Tree Hotel, Nairobi, Kenya
- Invited panelist, 2nd Annual Food Tank Summit in New York City. Entitled "Focusing on Food Loss and Food Waste," held on Wednesday, October 3, 2018 at New York University Law School.
- Invited panelist on "Post-Harvest Losses and Food Waste" during the 2018 High-Level
   Regional Policy Multi-Stakeholder Dialogue, 20 22 November 2018, Maputo, Mozambique
- Invited Panelist Towards Zero Food Losses by 2030, From Subsistence to Surplus, Bridging Humanitarian and Development Action to Power Economic Progress. 5<sup>th</sup> March, 2019, European Parliament, Brussels
- Invited Speaker/Panelist 'Agritech and Agribusiness: Innovations and Opportunities for Producing and Consuming Locally', 2019 Oxford Africa Conference, 17<sup>th</sup> – 18<sup>th</sup> May, 2019, Oxford University, UK
- Member of the Scientific Committee and Editorial Board, All Africa Horticultural Congress
   (AAHC 2020) of the International Society of Horticultural Science (ISHS)

- Invited panelist 'Postharvest Conference and East Africa Horticulture Experts Workshop' in Kigali, Rwanda on Jun 6-7, 2019.
- Invited Speaker: African Indigenous Vegetables: Africa Indigenous Vegetables: Presented at From Income Generation to Health and Nutrition Conference. Four Points Hotel, Nairobi, July 18-19, 2019
- Invited expert from KALRO to inventorize TIMPS (Technologies, Innovations and Management Practices) for Mango, Watermelon and Onions, July 1-5, 2019
- Invited Reviewer (KALRO), The Kenya Climate Smart Agricultural Project (KCSAP) Concept Notes, August 13-14, 2019
- Member of the 3-D Commission (2019-2020), a Global Commission on Determinants, Data and Decision-Making, led by Boston University and funded by Rockefeller Foundation
- Invited judge (Global) for the Food System Vision Prize, organized by the Rockefeller
   Foundation

## V. STRENGTHENING TRAINING FACILITIES AT THE FACULTY OF AGRICULTURE

- Urban Aggregation and Distribution Unit for Fruits and vegetables at UON Field Station –
  showcasing best practices for fruits and vegetables handling at aggregation centers and market
  outlets through an Industry-academia partnership between University of Nairobi and MRMSafal Group.
- Established the Innovative Low-cold Cold Storage Technologies: Research, Training and Demonstration Unit at the Field Station, Upper Kabete Campus, University of Nairobi – June
   Supported by the National Research Fund (NRF-Kenya) and other partners
- 3. Established the Fruit Processing Hub at Upper Kabete Campus, for capacity building of students and small-scale processors as part of community engagement and outreach initiatives.
- 4. Established a Mini-Lab for Postharvest Training at Faculty of Agriculture, Botany Main Lab

## W. SELECTED AWARDS/ FELLOWSHIPS/APPOINTMENTS

- African Biosciences Challenge Fund (ABCF) Fellowship to conduct short-term research at Biosciences eastern and central Africa (BecA-ILRI Hub (2014-2015)
- African Women in Agricultural Research and Development (AWARD) Fellowship for a two-year mentorship programme (2013)
- Norman E. Borlaug International Agricultural Science and Technology Fellowship. An 8 12 weeks Fellowship to be hosted at Michigan State University, USA. Supported by United
   States Department of Agriculture (USDA) and USAID (2012).
- Appointment to High Level Panel of Experts (HLPE) on Food Security and Nutrition
  project team on Food Losses and Waste appointed by the Food and Agriculture
  Organization (FAO) Committee on Food Security of the United Nations

## X. ADMINSTRATIVE/LEADERSHIP POSITIONS

### I. WITHIN THE UNIVERSITY

- Head of Horticulture Unit, Department of Plant Science and Crop Protection (2011 to date)
- Chair of the implementation committee for the University of Nairobi Sericulture Project, an academia-industry partnership, 2021to date
- Chair, UoN-MRM joint implementation committee an academia-industry partnership (2021-to date)
- Member of UON multi-disciplinary committee for Agriculture Technology and Innovation
   Center (ATIC), an academia-industry partnership 2021 to date
- College Representative on UON Strategic Plan Development Committee (2018-2019)
- Co-opted member of UON Planning Committee of 6th HUE Week RUFORUM Biennial
   Conference (2018)
- Member of Nairobi Innovation Week Committee (2019 to date)
- Member of UON Research Week Committee (2018 to 2022)

- University of Nairobi representative, World Universities Network (WUN) Research Group (2017 to 2020)
- Member of University of Nairobi Intellectual Property Policy Review Committee (2023)
- Science, Technology and Innovation, STI Faculty Champion for Faculty of Agriculture, 2023
- ARUA Food Security node coordinator 2016 to 2020
- Member of Faculty of Agriculture Research and Partnerships Committee (2018 to date)
- Chair of Faculty of Agriculture, Innovations, Commercialization and Visibility Committee
   (2019 to date)
- Chairperson, Organizing Committee of the Agro-2019 Faculty of Agriculture Conference
- Member of Local Organizing Committee 6th HUE Week and RUFORUM Biennial Conference (2018)
- Member of Plant Science and Crop Protection Research Committee (2020 to date)
- Assistant Examinations Coordinator, Department of Plant Science and Crop Protection (2013 2016)
- Coordinator, PhD Horticulture Program, 2021 to date
- Coordinator Fourth Year students Special Projects (2010 2017)
- Coordinator Msc students Proposal presentation seminars (2014 2017)

## II. OUTSIDE THE UNIVERSITY

- East Africa's Regional Coordinator for International Society of Horticultural Science (ISHS)
- Member of Regional Advisory Board for the Innovation Lab for Horticulture, Feed the Future
   (USAID) 2023 to 2026
- National Secretary, Kenya National Young Academy of Sciences (KNYAS)
- National Vice President, Kenya-International Forum for Science Alumni (Ke-IFSA)
- National Vice Chair, Kenya Japan Scholars (MEXT) Alumni Association
- Member of Executive Committee of the Kenya Japan Alumni Association (KEJAA)

Internal Auditor and member of Executive Committee, Horticultural Association of Kenya
 (2012 to 2017)

## Y. RECOGNITION AND AWARDS

- University of Nairobi Merit Award (2022), Recognition for Research and Academic Excellence
- Recognized by the FoodTank among the top 28 people globally impacting postharvest loss reduction - 2018
- 1st Runners up, National Diversity and Inclusion Awards and Recognition 2018
- Recognized as Innovation Champion under the Feed the Future Kenya Innovation Engine,
   2017
- Recognized and awarded in 2015 as the top fellow 'Influencer' following the completion of AWARD two-year mentorship Program (2013-2014)

## Z. MEMBERSHIP TO PROFESSIONAL ASSOCIATIONS

**2013 – present:** Member of American Society of Horticultural Science (ASHS)

**2005 – present:** Member of International Society of Horticultural Science (**ISHS**)

**2012 – present:** Kenya Society of Agricultural Professionals (**KESAP**)

**2016 – present:** African Women in Science and Engineering (AWSE)

2013 – present: African Women in Agricultural Research and Development (AWARD)

2008 – present: Member, Executive Committee member (Internal Auditor) of Horticultural Association of Kenya (HAK)

2014 – present: Kenya National Young Academy of Sciences (KNYAS)

1999 – present: Life member, Kenya Professional Association of Women in Agriculture and Environment (KEPAWAE)

2016 to present: Member of University of Nairobi Alumni Association (UONAA)

# AA. ACADEMIC AND PROFESSIONAL REFEREES

### 1. Prof. James Muthomi

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